

Genus Ruppellia Swainson

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Ruppellia Swainson, Nat. Hist. Animals,
vol. 2, p. 281, 1839. (Type Gobius
echinocephalus Rueppell, monotypic.)

(Rüppellia Wiedemann 1830 in Diptera
not involved.)

Ruppellia Swainson, op. cit., p. 184.
(~~Atypia~~. Type Gobius echinocephalus
Rueppell, virtually.)

Ruppellia Jordan and Richardson,
Philippine Journ. Sci., p. 47, 1910.
(Type Gobius echinocephalus Rueppell.)

Paragobiodon Bleeker, Nat. Tijds.
Dierk., vol. 4, p. 129, 1873. (Type
Gobius echinocephalus Rueppell,
monotypic.)

Body compressed. Head nearly globular, less than twice high as wide. Mouth very oblique, jaws subequal. Band of filiform teeth in each jaw, outer row enlarged. Lower jaw on both sides of symphysis at inner edge of dental band with 1 or 2 canines. Tongue rounded. No barbels. Nostrils in short tubes. Isthmus broad. Scales 22 to 24 in axial lateral series, strongly ctenoid. Head naked, covered with papillary appendices. Open pores above on head, behind eye and along edge of preopercle. Dorsal fins close together, first fin with 6 spines, second fin

with 9 or 10 rays. Anal like ⁸⁰⁰
second dorsal. Caudal rounded.
Pectoral without free rays.

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Rupellia echinocephala (Rüppell)

Gobius echinocephalus Rüppell, Atlas
Reise nördl. Afrika, Fische, p. 136, pl.
34, fig. 3, 1828 (type locality, Massawa,
Red Sea). — Valenciennes, Hist. nat.
Poiss., vol. 12, p. (101) 134, 1837 (Massawa).
— Rüppell, Neue Wirbelth. Fische, p.
138, 1838 (Massawa). — Günther, Cat.
Fish. Brit. Mus., vol. 3, p. 34, 1861
(Red Sea; China Seas).

— Klunzinger, Verh. zool. bot. Gesell.
Wien, vol. 21, p. 475, 1871 (Red Sea).
— Peters, Monatsber. Akad. Wiss. Berlin, p. 840, 1876 (1877) (Tunisia).
— Günther, Journ. Mus. Godeffroy,
vol. 6, pt. 11, p. 175, pl. 108, fig. D,
1877 (Samoa; Tahiti; Tonga;
Meduro; Port Bowen; China Sea;
Red Sea). — Streets, Bull. U. S.
Nat. Mus., no. 7, p. 95, 1877 (Samoa).
— Schmeltz, Cat. Mus. Godeffroy,
no. 7, p. 46, 1879 (Viti Levu). —
Günther, Rep. Voy. Challenger, vol. 1, pt.
6, p. 53, 1880 (Cebu). — Steindachner,
Sitzb. Ber. Akad. Wiss. Wien, vol. 115, pt. 1,
p. 1407, 1906 (Upolu).

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Paragobiodon echinocephalus Bleeker,
Ned. Tijds. Dierk., vol. 4, p. 129, 1873
(reference); Verh. Kon. Akad. Wet.
Amsterdam, vol. 18, p. 17, 1879 (Havitiu).
23.3,

Jordan and Seale, Bull. Bur.
Fishes, vol. 25, p. 397, 1905 (1906) (Apia;
Pago Pago). — McCulloch and Ogilby,
Rec. Austral. Mus., vol. 12, no. 10, p.
239, pl. 34, fig. 1, July 14, 1919 (Port
Curtis and Green Island, Endeavour
R. and Murray Island, Queensland;
types G. gibbosus and G. scabriceps;
New Guinea; Duke of York Island;
Bougainville Island). — Fowler, Bull.
Bishop Mus., no. 22, p. 17, 1925 (Guam),
p. 36 (Samoa). — Fowler and Ball,
Bull. Bishop Mus., no. 26, p. 27, 1925 (reference).
— McCulloch and Whitley, New Queensland Mus., vol. 8, pt. 2, p. 172, July 7, 1925 (reference).
(Wake Island). — Fowler, Bull. Bishop
Mus., no. 38, p. 27, 1925 (Palmyra;
Christmas Island). — Herre, Gobies of
Philippines, p. 172, pl. 13, fig. 2, 1927
(Zamboanga; Puerto Galera; Zamboanga;
Guindulman; Samal; Sitanbi). —
Whitley, Australian Zoologist, vol. 4, pt. 4, April
1926 (North-west Islet); Rec. Austral. Zool., vol. 16, no. 1, p.
28, Oct. 7, 1927 (Michaelmas Cay).

— Fowler, Mem. Bishop Mus., vol. 10, p.
 399, 1928 (Shortland Island; Palmyra;
 Guam; Wake Island; Fiji; type of
Ruppellia lacunicola; Apia; Bora-
 bora; Makemo; Society Islands;
 Elton Islands; Vavau). — Fowler, op. cit., 5,
 vol. 11, no. 5,
 — McCulloch, Austral. Mus. Mem., no. 5, p. 379 (no. 28, 1929 (reference)).
 p. 361, 1931 (reference). — Herre, Journ.
 Pan-Pac. Res. Inst., vol. 7, no. 1, p. 5,
 Jan. - March 1932 (Tahiti); Fishes
 Herre 1931 Philippine Exped., p. 83,
 1934 (Unisan; Dumaguete; Jolo;
 Sitanki). — Fowler, Mem. Bishop
 Mus., vol. 11, no. 6, p. 442, 1934 (Isle
 of York I.; Solomons; New Guinea).
 — Tomiyama, Jap. Journ. Zool., vol. 7,
 no. 1, p. 57, 1936 (Amami-Oshima;
 Philippines; Palau). — Roxas and
Martin, Dep. Agric. Comm. Manila,
 Techn. Bull. 6, p. 233, 1937 (reference).

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Kurtus echinocephalus Pöhl, Cat. Mus.
Godeffroy, No. 10, p. 30, 1884 (South Seas).

Ruppellia echinocephala Jordan and
Richardson, Philippine Journ. Sci., p.
47, 1910 (reference). — Ogilby, Mem.
Queensland Mus., vol. 2, p. 92, 1913.

Ruppellia echinocephalus Kendall and
Goldsbrough, Mem. Mus. Comp. Zool.,
vol. 26, p. 318, 1911 (Makemo; Rangiroa;
Davan; Borabora).

Gobius amiciensis Valenciennes, Hist.
Nat. Poiss., vol. 12, p. (102) 135, 1837
(type locality, Tongatabu; Carteret
Harbor, New Ireland). — Günther,
Cat. Fish. Brit. Mus., vol. 3, p. 35,
1861

— Steindachner, Sitzs. Ber. Akad. Wiss.
Wien, vol. 54, pt. 1, p. 367, 1866 (Samoa).
— Peters, Monatsb. Akad. Wiss. Berlin,
p. 840, 1876 (1877) (Hapai, Tonga).
— Schmeltz, Cat. Mus. Godeffroy,
no. 7, p. 46, 1879 (Samoa). — Sauvage,
Hist. Nat. Madagascar, Poiss., p. 352,
pl. 41, 1891.
— Martens, Preuss. Exped. Ost. Asien, vol. 1, p. 391,
1876 (Zamboanga, Mindanao).

Kurtus amiciensis Schmeltz, Cat. Mus.
Godeffroy, no. 4, p. 18, 1869 (Samoa). —
Pöhl, Cat. Mus. Godeffroy, no. 10, p. 30,
1884 (South Seas).

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Gobius xanthosoma Bleeker, Nat. Tijds.
Ned. Indie, vol. 3, p. (690) 703, 1852
(type locality, Waihai, Ceram); vol.
5, p. 429, 1853 (Pontianak, Borneo);
vol. 7, p. 228, 1854 (Kema, Celebes);
vol. 11, p. 385, 1856 (Kajeli, Buru);
Act. Soc. Sci. Ind. Néerl., vol. 1, no.
5, p. 6, 1856 (Amboina); — Günther,
Cat. Fish. Brit. Mus., vol. 3, p. 42, 1861.
— Gogorza, An. Soc. Españ. Hist. Nat. Madrid, vol. 14, p.
73, 1885 (Manila).

Gobiodon xanthosoma Bleeker, Nat. Tijds.
Ned. Indie, vol. 15, p. 201, 1858 (Goram);
Act. Soc. Sci. Ind. Néerl., vol. 2, no. 7,
p. 6, 1857 (Amboina); Nat. Tijds.
Ned. Indie, vol. 22, p. 249, 1860
(Timor); Nat. Tijds. Dierk., vol. 1,
p. 254, 1863 (Waihai, Ceram).

Paragobiodon xanthosoma Bleeker, Arch.
Néerl. Sci. Nat. Harlem, vol. 13, p. 54,
1878.

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Paragobiodon xanthosomus Jordan and Seale, Bull. Bur. Fisher., vol. 25, p. 397, 1905 (1906) (Apia). — Herre, Gobies of Philippines, p. 175, 1927 (Samal; Dumaguete; Sitambi).

Ruppellia xanthosoma Jordan and Dickerson, Proc. U. S. Nat. Mus., vol. 34, p. 617, 1908 (Suva).

Gobius melanosoma Bleeker, Nat. Tijds. Ned. Indie, vol. 3, p. (690) 703, 1852 (type locality, Wahai, Ceram); vol. 13, p. 56, 1857 (Kajeli, Borneo). Act. Soc. Sci. Ind. Nederl., vol. 2, no. 6, p. 5, 1857 (Doreh, New Guinea); vol. 2, no. 7, p. 6, 1857 (Amboina); Nat. Tijds. Ned. Indie, vol. 15, p. 201, 1858 (Goram); vol. 22, p. 249, 1860 (Timor). — Peters, Monatsber. Akad. Wiss. Berlin, p. 265, 1868 (Luzon). — Day, Fishes of India, pt. 2, pl. 64, fig. 1, 1876 (Andaman); Fauna British India, Fishes, vol. 2, p. 269, 1889.

Gobiodon melanosoma Bleeker, Nat. Tijds. Ned. Indie, ←

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Paragobiodon melanosoma Bleeker,
~~Arch. Néerl. Sci. Nat. Harlem, vol. 9, p.~~
~~329, 1877 ()~~; Rech. Faun.
Madagascar, Poiss., p. 78, 1875 (Mad-
agascar); Arch. Néerl. Sci. Nat.
Harlem, vol. 13, p. 54, 1878 (New Guinea).
— Jordan and Seale, Bull. Bur.
Fisher., vol. 26, p. 45, 1906 (Manila).
— Herre, Gobies of Philippines, p.
174, 1927 (Puerto Galera; Zamboanga).

Paragobiodon melanosomus Herre, Fishes
Herre 1931, Philippine Exped., p. 83, 1934
(Sitambi).

Ruppellia melanosoma Jordan and
Richardson, Philippine Journ. Sci.,
p. 47, 1910 (reference).

Gobius gobiodon Day, Proc. Zool. Soc.
London, p. 516, 1869 (type locality,
Andaman Islands).

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Gobius gibbosus Macleay, Proc. Linn.
Soc. New South Wales, Vol. 5, p. 601,
1881 (type locality, Endeavour River,
Queensland).

Gobius scabriceps Macleay, op. cit., vol. 5,
p. 603, 1881 (type locality, Endeavour
River, Queensland).

Gobius waitei Garman, Bull. Mus. Comp.
Zool., vol. 39, p. 234, pl. 3, fig. 3, 1903
(type locality, Cairns, Queensland).

Awaous crassilabris (not Günther) Seale,
Occas. Pap. Bishop Mus., vol. 4, no. 1, p.
84, 1906 (Shortland Island).

Gobiopterus modestus Regan, Trans. Linn.
Soc. London, ser. 2, vol. 12, p. 242, pl. 29,
fig. 1, 1908 (type locality, Chagos Archipelago,
Egmont and Salomon).

Ruppellia launicola Kendall and
Goldsborough, Mem. Mus. Comp. Zool.,
vol. 26, p. 318, pl. 6, fig. 1, 1911 (type
locality, Fakarava, Taumotu).

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Paragobiodon keoni H. M. Smith, Proc.
U. S. Nat. Mus., vol. 79, art. 7, p. 42,
fig. 20, 1931 (type locality, Koh Tao,
Gulf of Siam).

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Depth 3 to 4; head $2\frac{7}{8}$ to $4\frac{3}{4}$,
width $1\frac{1}{8}$ to $1\frac{1}{3}$, Snout 3 to
4 in head; eye $3\frac{2}{3}$ to 5, greater
than snout to $1\frac{3}{5}$ in snout,
 $1\frac{1}{5}$ to $1\frac{1}{2}$ in interorbital;
maxillary reaches opposite front
eye edge or $\frac{1}{5}$ in eye, length
 $2\frac{1}{4}$ to 3 in head; mouth
small, subvertical or greatly
inclined, begins in front little
below level of lower eye edge,
lower broad swollen mandible
usually protruded in front;
each jaw with band of villiform
teeth, anterior outer series
little enlarged, below pair
of canines behind symphysis
and 2 or 3 smaller lateral ones;
tongue convex in front; inter-
orbital $2\frac{2}{3}$ to $4\frac{3}{4}$ in head,
little convex.

Scales 23 or 24 in lateral
series; 10 transversely between

front of second dorsal and ^{8/12} anal. Head, predorsal, prepectoral region, chest and breast naked; head with small ^{flabby} prickles or papillae, sometimes hair like, and variously scattered or massed, as sometimes densely so, on predorsal or under surface of head, or may even extend on ventral fins. Scales on body ctenoid.

D. VI, I, 9 or 10, third spine 2 to $2\frac{1}{3}$ in total head length second dorsal height $1\frac{3}{5}$ to $1\frac{3}{4}$; A. I, 9, fin height $1\frac{4}{5}$ to $1\frac{7}{8}$; caudal $1\frac{1}{5}$ to $1\frac{2}{5}$, convex behind; least depth of caudal peduncle $1\frac{4}{5}$ to $1\frac{7}{8}$; pectoral 1 to $1\frac{1}{8}$, rays 16 to 19; ventral rays I, 5, fin $1\frac{1}{3}$ to $1\frac{2}{5}$ in head. ^{Coloration} variable, black, brown, green, yellow or pink. Body often dark and head pale.

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sometimes head and body either
uniformly dark or light, or
sometimes only ventrals blackish.

Red Sea, Mauritius, Madagascar,
Chagos Archipelago, Andamans,
Nicobars, East Indies, Siam,
Philippines, Rin Ku, China,
Queensland, Melanesia, Micronesia,
Polynesia.

*One example. Bubuan Island, Jolo.
Dynamite. February 14, 1908. Length
17 mm.*

*One example. Jolo, shore seine. March
6, 1908. Length 36 mm.*

U. S. N. M., no. 15113. Samoa.
Steinberger. Length 13 to 27 mm.
Six examples.

U. S. N. M., no. 52244. Apia, Samoa.
Bureau of Fisheries. Length 12 to
24 mm. Five examples.

U. S. N. M., no. 66005. Borabora,
Society Islands. Albatross.
Collection 1899-1900. Length 22 mm.

U. S. N. M., no. 82939. Fiji or
Samoa. Wilkes Exploring Expedition.

U. S. N. M., no. 82955. Fiji or
Samoa. Wilkes Exploring Expedition.

U. S. N. M., no. 52254. Apia, Samoa.
Bureau of Fisheries. Length 27 to
32 mm. Six examples. As Para-
gobiodon xanthozoma.

Genus Gobius Linnaeus

Gobius Linnaeus, Syst. Nat., ed. 10, pt. 1, p. 262, 1758. (Type Gobius niger Linnaeus, designated by Bleeker, Arch. Néerl. Sci. Nat. Harlem, vol. 9, p. 316, 1874.)

Gobio Klein, Gesellsch. Schauplatz, vol. 7, p. 178, 1779. (Type Gobius niger Linnaeus) (inadmissible)

Priolepis Valenciennes, Hist. Nat. Poiss., vol. 12, p. 67, 1837. (Type Priolepis mica (Ehrenberg) Valenciennes, designated by Whitley, Australian Zoologist, vol. 6, p. 123, Jan. 14, 1930.)
Ctenogobius Gill, Ann. Lye. Nat. Hist. New York, vol. 6, p. 374, 1858. (Type Ctenogobius fasciatus Gill, orthotypic.)

Rhinogobius Gill, Proc. Acad. Nat. Sci. Philadelphia, p. 145, 1859 (1860). (Type Rhinogobius similis Gill, orthotypic.)

Pomatoschistus Gill, op. cit., vol. 15, p.
263, 1863. (Type Gobius minutus
Linnaeus, orthotypic.)

Deltoosteus Gill, op. cit., p. 263.
(Type Gobius quadrimaculatus
Valenciennes, orthotypic.)

Coryphopterus Gill, op. cit., p. 263.
(Type Coryphopterus glaucofraenum
Gill, orthotypic.)

Mesogobius Bleeker, Arch. Néerl.
Sci. Nat., Harlem, vol. 9, p. 317, 1874.
(Type Gobius batrachocephalus
Pallas, orthotypic.)

Gnatholepis Bleeker, op. cit., p. 318.
(Type Gobius anjerensis Bleeker,
orthotypic.)

Acentrogobius Bleeker, op. cit., p. 321.
(Type Gobius chlorostigma Bleeker,
orthotypic.)

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Porogobius Bleeker, op. cit., p. 321.
(Type Gobius schlegelii B. Günther,
orthotypic.)

Zanogobius Bleeker, op. cit., p. 323.
(Type Gobius semifasciatus Kner,
orthotypic.)

Lebetus Winther, Naturhist. Tidsskr.,
ser. 3, vol. 11, p. 49, 1877. (Type Gobius
scorpioides Collett, monotypic.)

Lebetes (not Filippi = 1861-62) Jordan, Genera of Fishes,
pt. 4, p. 487, Aug. 15, 1920. (Type Gobius scorpioides Collett.)

Bathygobius Bleeker, Arch. Néerl.
Sci. Nat. Harlem, vol. 13, p. 54, 1878.

(Type Gobius nebulopunctatus
Valenciennes = Gobius fuscus
Rüppell, monotypic.)

Caffrogobius Smith, Joers. Vet.
Akad. Förh. Stockholm, p. 540, 1899.
(Type Gobius nudiceps Valenciennes,
monotypic.)

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Mugilogobius Smitt, op. cit., p. 543.
(Atypic. Type Ctenogobius abei
Jordan and Snyder, designated
by Jordan, Genera of Fishes,
Pt. 4, p. 487, 1920.)

Maipo Smitt, op. cit., p. 543. (Type
Gobius soporator Valenciennes,
monotypic.)

Proterorhinus Smitt, op. cit., p. 544.
(Type Gobius marmoratus Pallas,
monotypic.)

Eichwaldia ^(not) Smitt, op. cit., p. 545.
(Type Gobius caspicus Eichwald,
monotypic.)

Hazeus Jordan and Snyder, Proc.
U. S. Nat. Mus., vol. 24, p. 51, Sep. 25,
1901. (Type Hazeus otakii Jordan
and Snyder, monotypic.)

Chlamydes Jenkins, Bull. U.S. Fish Comm., vol. 22, p. 503, Sep. 23, 1903.
(Type Chlamydes laticeps Jenkins, monotypic.)

Disquilius Jordan and Evermann, Bull. U.S. Fish Comm., vol. 22, p. 203, 1902 (April 11, 1903). (Type Disquilius eugenius Jordan and Evermann, monotypic.)

Creisson Jordan and Seale, Bull. Bur. Fisher., vol. 26, p. 43, 1906 (1907). (Type Creisson validus Jordan and Seale, orthotypic.)

Drombus Jordan and Seale, Proc. U.S. Nat. Mus., vol. 28, p. 797, 1905. (Type Drombus palachyi Jordan and Seale, monotypic.)

Vaimosa Jordan and Seale, Bull. Bur. Fisher., vol. 25, p. 395, Dec. 15, 1906. (Type Vaimosa fontinalis Jordan and Seale, orthotypic.)

Epyrias Jordan and Seale, op. cit., p. 405. (Type Yobius puntangoides Bleeker, monotypic.)

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Pleurogobius Seale, Philippine
Journ. Sci., vol. 4, no. 6, p. 536, 1906.
(Type Pleurogobius boulengeri
Seale, monotypic) (no generic
description).

Ulcigobius Fowler, Proc. Acad. Nat.
Sci. Philadelphia, vol. 70, p. 69, 1918.
(Type Drambus maculipinnis
Fowler, orthotypic.)

Opua E. K. Jordan, Proc. U. S. Nat.
Mus., vol. 66, ^{art. 33,} p. 36, 1926. (Type
Opua nephodes E. K. Jordan, orthotypic.)

Tubugobius Herre, Gobies of Philippines,
p. 119, 1927. (Type Rhinogobius
carpenteri Seale, orthotypic.)

Pandaka Herre, op. cit., p. 196. (Type
Pandaka pusilla Herre, orthotypic.)

Cingulogobius Herre, op. cit., p. 201. (Type
Pleurogobius boulengeri Seale, orthotypic.)

Tamanaka Herre, op. cit., p. 220. (Type
Tamanaka sütensis Herre, orthotypic.)

Amoya Herre, op. cit., p. 225. (Type
Gobius brevirostris Günther, orthotypic.)

Gobiusculus Duncker, Tierwelt Nord
und Ostsee, p. 123, 1928. (Type
Gobius flavescens Fabricius.)

Lesneuria ~~gobius~~
Duncker, op. cit., p. 124. (Type Gobius
lesneuri Risso.)

Knipovitschia Igin, Rep. Astrakhan
Sci. Fishery Sta., vol. 6, no. 3, ~~1928~~
1928. (Type Gobius longicaudatus
var. a-b Kessler.)

Hyracanogobius Igin, op. cit. (Type
Hyracanogobius bergi Igin =
Gobius longicaudatus var. a-b. Kessler.)

Berowra Whitley, Records Austral.
Mus., vol. 16, Pt. 4, p. 224, March 28,
1928. (Type Gobius lidwilli Mc
Culloch, orthotypic.)

Mesogobius Whitley, Proc. Roy.
Soc. Tasmania, p. 62, 1928 (Jan.
16, 1929). (Type Gobius hinsbyi
McCulloch and Ogilby, orthotypic.)

Berowra Whitley, Records Austral.

Mus., vol. 16, ^{March 28,} p. 224, 1928. (Type

Gobius lidewilli McCulloch, orthotypic.)

Mesogobius Whitley, Proc. Roy. Soc. Tasmania, 1928, p. 62, Jan. 16, 1929. (Type Gobius hinsbyi McCulloch and Ogilby, orthotypic.)

Fusigobius Whitley, op. cit., vol. 18, p. 2, p. 122, ^{Jan. 14,} 1930. (Type Gobius neophytus

Günther, orthotypic.)

Favonigobius Whitley, Australian Zoologist, vol. 6, p. 2, p. 122, Jan. 14, 1930. (Type Gobius lateralis Macleay, orthotypic.)

Arenigobius Whitley, Austral. Zoologist, vol. 6, p. 122, ^{Jan. 14,} 1930. (Type Gobius

bifrenatus Kner, orthotypic.)

Chlamydogobius Whitley, op. cit., p. 122, Jan. 14, 1930. (Type

Gobius eremius Fretz, orthotypic.)

Parvigobius Whitley, op. cit. (Type

Parvigobius imberitus Whitley =

Gobius flavescens (not Schneider) de Vis, 1881, orthotypic.)

Astreogobius Whitley, op. cit., p. 122, Jan. 14, 1930. (Type Gillichthys australis Ogilby, orthotypic.)

Eichwaldiella Whitley, op. cit., p. 123.

(Type Gobius caspius Eichwald.)

Eichwaldiella Whitley proposed to replace Eichwaldia Smith.

Butigobius Whitley, Australian Zoologist, vol. 6, p. 2, p. 123, Jan. 24, 1930. (Type "Lobites scorpioides Smith" = Gobius scorpioides Collett, orthotypic.)

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Cabotia de Buen, Trab. Inst. Esp.
Oceanogr., vol. 5, p. 18, 1930. (Type
Cabotia schmidti de Buen.)

Istigobius Whitley, Fish. Great Barrier
Reef Exped., 1928-29, Sci. Rep. vol. 4,
no. 9, p. 301, 1932. (Type Gobius
maculatus Castelnau, orthotypic.)

Isthmogobius (Bleeker) Koumans,
Prelim. Rev. Gobioid Fish., p. 86, 1931.
(Type Gobius balinurus Valenciennes,
orthotypic.)

Chlamydogobius Whitley,

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Ellogobius Whitley, Records Austral.
Mus., vol. 19, no. 1, p. 92, Aug. 2, 1933.
(Type Gobius stigmataceus De
Vis, orthotypic.)

Lizagobius Whitley, op. cit., p. 93,
Aug. 2, 1933. (Type rugilobius
galwayi Mc Culloch and Waite,
orthotypic.)

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Genus Psammogobius J. L. B. Smith.

Psammogobius J. L. B. Smith, Records
Albany Mus., vol. 4, pt. 2, p. 215, May
23, 1935. (Type Psammogobius
hypsenaensis J. L. B. Smith, ortho-
typic.)

Differs from Gobius only in the
very wide and unrestricted
gill opening, the gill-membranes
completely free from the isthmus.
Entrails elongate, reaching
anal base or beyond.

Paroxyranchthys sagittula (Günther)

Ectenogobius sagittula Günther,

828

Body oblong or elongate, compressed behind. Head oblong, more or less depressed, abruptly widened behind eyes. Snout usually broadly rounded, with convex profile. Eyes variably large or small, elevated, advanced or in front half of head, close together. Mouth moderate, variously inclined. Teeth in jaws only, conic, in several series, outer row enlarged. Lips variously fringed or entire. Gill opening lateral. Isthmus wide. Shoulder girdle without fleshy lips or papillae. Scales moderate, ~~or~~ ctenoid, variously forward on head and predorsal. Prepectoral region, chest and breast variously scaled or naked. Two dorsals, front

829

fin with about 6 rather weak
spines. Caudal usually obtuse.
Pectorals well developed,
upper rays with confluent
membrane, sometimes free,
detached and silk like.
Ventrals large or small, com-
pletely united, not attached
to belly.

A large genus with very
numerous species at here I
understood. Many are little
known, imperfectly described,
or when figured often un-
satisfactory, therefore their
relationship uncertain. I
have thus grouped a large
number below in only alphabeti-
cal sequence until they may be
better understood known.

Gobius abascantus (Whitley)

Ellogobius abascantus Whitley,
Records Austral. Mus., vol. 20, No. 1,
p. 17, fig. 4, May 15, 1937 (type locality,
a very shallow brackish creek
near the Hanging Rock camping
ground~~x~~ at Bateman's Bay, New
South Wales).

830a

Depth $6 \frac{3}{4}$; head $3 \frac{3}{4}$. Snout $4 \frac{1}{2}$ in head; eye $4 \frac{1}{2}$, equals snout; maxillary reaches $\frac{3}{4}$ in eye, length $2 \frac{3}{4}$ in head; mouth low, terminal, but little inclined, lower jaw slightly shorter; lips sinuate; each jaw with band of fine villiform teeth; tongue with very shallow notch anteriorly; interorbital broad, sunken. Gill openings separated by wide isthmus.

Scales 52 to 60 in lateral series; 15 transversely. Head naked, mucous papillae reduced or absent. Predorsal, breast and prepectoral regions naked. Body covered with cycloid scales, small anteriorly, larger on caudal peduncle.

D. VI-8, third spine $2 \frac{2}{5}$ in head, fifth ray $2 \frac{1}{5}$; A. 10, eighth ray $2 \frac{1}{5}$; caudal $1 \frac{1}{6}$, convex

835b

behind; least depth of caudal peduncle $2\frac{1}{4}$; pectoral $1\frac{2}{5}$, rays 16, none detached; ventral 2 in head, rays $\overline{1}, 5$, united, with frenum, free from body. Anal papilla half of eye.

Very pale dirty yellow or cream, overlain by numerous indistinct and broken sooty blotches on upper half of fish. Reticulated pattern of fuscous chromatophores behind eye. Dark blotch on opercle, one on hind dorsal spines and most conspicuous of all an irregular blackish blotch at base of caudal. Most fin rays with double series of fine black dots. Pale orange smudge along thorax ventrally. Eyes and snout dull bluish. Length 38 mm. (Whitley.) New South Wales.

831

Gobius agulhensis Barnard.

Gobius agulhensis Barnard, Ann.
South African Mus., vol. 21, pt. 2, p.
821, Oct. 1927 (type locality, False
Bay; St. Sebastian Bay; Mossel
Bay; off East London; in 20 to 40
fathoms).

Depth 5 to $5\frac{1}{2}$, body feebly compressed;
head $3\frac{1}{5}$ to $3\frac{1}{2}$, width $1\frac{1}{3}$. Eye
4 in head, equal to snout; maxillary
reaches below front eye edge;
jaws subequal; teeth with outer
enlarged series, no canines; tongue
free, apically rounded; ~~interorbital~~
interorbital very narrow. Gill rakers
6 or 7 knobs on front arch. Pseudo-
branchiae moderately developed.
Small flap on front edge of
shoulder girdle usually present.
Scales 44 to 46 in lateral series;

11 or 12 transversely. Head, pre-dorsal and prepectoral regions naked. Vertical and horizontal series of papillae on cheeks and opercle, series round lower edge of preopercle continued (in a groove) on to lower surface of mandible.

D. VI - I, 11, fins narrowly separated; A. I, 10; caudal rounded, shorter than head; pectoral rays 21, upper rays not filamentous; ventrals reaching to or nearly to vent.

As preserved light brown, with darker irregular blotches on sides, sometimes forming more or less definite cross-bars. First dorsal faintly barred, with age black blotch between fourth and sixth spines. Second dorsal faintly spotted. Anal usually gray. Ventrals often dusky.

Length to 90 mm.

South Africa.

(Barnard.)

Gobius abei Jordan and
Snyder)

~~Gobius abei (Jordan and Snyder)~~

U.S.N.M., no. 85967. China. A. de C. Sowerby. Length 36 mm.

U.S.N.M., no. 49892. Wakanoura, Kii, Japan. D.S. Jordan and J.D. Snyder. Length 43 mm. "Cotype" [= paratype] of Hazeus abei Jordan and Snyder.

833

Gobius albomaculatus ^{Rüppell} ~~Günther~~

Gobius albomaculatus Rüppell,
Atlas Reise nördl. Afrika, Fische,
p. 135, 1828 (type locality,
Massauah, Red Sea); Neue
Wirbelth. Fische, p. 137, 1835.

— Peters, Archiv Naturges., p. 250,
1855 (). — Günther,
Cat. Fish. Brit. Mus., vol. 3, p. 69,
1861 (Red Sea).

Gobius quinqueocellatus Valenciennes,
Hist. Nat. Poiss., vol. 12, p. () 95,
1837 (type locality).

~~Gobius albomaculatus~~

U.S.N.M., no. 12638. Zanzibar. British Museum. Length 95

mm.

Gobius alcocki Annandale

Gobius alcocki Annandale, Journ.
Asiatic Soc. Bengal, 1906, p. 201, fig. 1
(type locality, Port Canning
and Calcutta).

Ctenogobius alcocki Hora, Mem. Asiatic
Soc. Bengal, vol. 6, p. 495⁴, 1924 (Tab. Vap.).
— Swatti, Index Fish. Siam, p. 153,
1936 (reference).

Mem. Indian Mus., vol. 5, p. 744, 1923 (Chilka L.).

835a

Gobius aliciae (Herre).

Aboma aliciae Herre, Bull.
Raffles Mus. Singapore, no. 12, p.
10, pl. 7, May 1936 (type locality,
Reef in Singapore Harbor).
Herre and Myers, op. cit., no. 13,
p. 45, Aug. 1937 (type).

Depth 6; head $3\frac{1}{2}$. Snout 4 in
head; eye $3\frac{1}{4}$, greater than snout,
enters upper profile of head;
maxillary reaches front eye edge,
length $3\frac{1}{2}$ in head; mouth
~~slightly projects~~ oblique, lower
jaw slightly projecting; eyes with
inner margins touching.

Scales $27 + 1$ in lateral series,
8 transversely, 3 predorsal. Head
and most of predorsal region
naked, rest of body with ctenoid
scales.

D. VII - I, 8, third spine $1\frac{3}{4}$ in
head, first branched ray 2;

A. I, 8, first branched ray 3; caudal $1\frac{1}{8}$, median rays longest and fin rounded behind; least depth of caudal peduncle 3; pectoral $1\frac{2}{5}$; ventral $1\frac{1}{5}$. Anal papilla $2\frac{1}{2}$ in eye, small, cylindrical, pointed.

Color in alcohol whitish, back and sides flecked with dusky dots and patches, and 5 large double black spots, last on caudal base. Black bar from eye to lower lip. Black stripes on cheeks and opercle. Black spot on pectoral base.

Length 42 mm. (Herre).
Singapore.

Gobius anjerensis Bleeker

Gobius anjerensis Bleeker, Nat. Tijds.
Ned. Indië, vol. 1, p. 251, fig. 11, 1850
(type locality, Anjer [in mari?]).

— Károli, Termesz. Füzetek, Budapest, vol. 5,
p. 164, 1881 (1882) (Ning).

Gnatholepis anjerensis Fowler, Copeia,
no. 112, p. 84, Nov. 20, 1922 (Hawaii);
Mem. Bishop Mus., vol. 10, p. 406,
1928 (Society Islands; Oahu; Honolulu;
types of Gobius deltoides; Wake I.;
Apia). — Fowler and Ball, Bull.
Bishop Mus., no. 26, p. 27, 1925 (Wake
I.).

837

Gobius cauerensis Bleeker

- Gobius cauerensis Bleeker, Nat. Tijds.
hed. Indie, vol. 4, p. 269, 1853 (type
^(Acht. Sumatra) locality, Cauer, Sumatra); — Günther,
Cat. Fish. Brit. Mus., vol. 3, p. 41,
1861 (copied). — Weber, Siboga
Exped., vol. 57, Fische, p. 460, 1913
(Sanguisipao; Beo; Lirung; Ambon; Samana; Nusa Laut).
— Herre, Gobies of Philippines, p. 107,
1927 (copied). — Chu, Biol. Bull.
St. John's Univ., no. 1, p. 160, Jan.
1937 (reference). — Roxas and Marten,
Departm. Agric. Comm. Manila, Tech. Bull.
6, p. 223, 1937 (reference).
— Rendahl, Arkiv för Zool. Stockholm,
vol. 16, no. 2, p. 20, 1924 (reference).
— Fowler, List Fish. Malaya, p. 217,
1938 (reference).

Acentrogobius cauerensis Koumans, Zool. meded.
Rijks Mus. Nat. Hist. Leiden, p. 135, 1935 (discussion).

Gobius ophthalmotaenia Bleeker, Nat.

Tijds. Ned. Indie, vol. 7, p. 46, 1854

(Type locality, ^{Nova Helma [Cox-Keeling]}
act. ^{act. Soc. Sci. Ind. Néerl. Ident. Celebes}, vol. 8, p. 44, 1860 (Celebes))
✓ Günther, Cat. Fish. Brit. Mus.

vol. 3, p. 37, 1861 (China ^{Fishes of Zanzibar, p. 71} Sea); 1866 (reference).

— Bleeker, Nat. Tijds. ~~Ned. Indie~~ ^{algeria} ~~Indie~~,
vol. 4, p. 128, 1873 (1874) (reference).

— Károli, Termesz. Füzetek, Budapest,
vol. 5, p. 164, 1881 (1882) (Singapore).

— Meyer, Anal. Soc. Espan. Hist. Nat.
Madrid, vol. 14, p. 29, 1885 (Cebu).

Acentrogobius ophthalmotaenia

Streets, Bull. U. S. Nat. Mus., vol. no.
7, p. 60, 1877 (coral reefs at Oahu).

Gobiichthys lonchotus (not Jenbuis)

Jordan and Evermann, Bull. U. S.
Fish Comm., vol. 23, pt. 1, p. 485,

fig. 213, 1903 (1905) (Waikiki
material; part).

Gobiichthys papuensis (not Valenciennes)

Fowler, Mem. Bishop Mus., vol. 10, p. 415,
1928 (part).

Gobius capistratus Peters, Archiv
Naturges., vol. 21, pt. 1, p. 251, 1855
(type locality,); Monatsb.
Akad. Wiss. Berlin, 1855, p. 443.

Gobius canala Sauvage, Bull. Philom. Paris, ser. 7, vol. 5, p. 102, 1881 (type locality, Canala, New Caledonia).

Gobius deltoides Seale, Decas. Pap. Bishop Mus., vol. 1, no. 3, p. 125, 1900 (type locality, Guam).

Gnatholepis deltoides Jordan and Seale, Bull. Bur. Fisher., vol. 25, p. 394, fig. 84, 1905 (1906) (Lipia; Pago Pago). — Herre, Gobies of Philippines, p. 132, 1927 (San Juan, Siquijor). — Roxas and Martin, Departm. Agric. Commerce Manila, Tech. Bull. 6, p. 232, 1937 (reference).

Gnatholepis knighti Jordan and Evermann, Bull. U. S. Fish Comm., vol. 22, p. 204, 1902 (1903) (type locality, Honolulu; Hilo; Waianae); vol. 23, pt. 1, p. 487, pl. 58, 1903 (1905) (Hilo; Honolulu; Waianae; Waikeke).

— Jordan and Jordan, Mem. Carnegie Mus., vol. 10, no. 1, p. 78, Dec. 1922 (Hilo). — Herre, Gobies of Philippines, p. 137, pl. 29, fig. 1, 1927 (Potillo; haloo). — Roxas and Martin, Departm. Agric. Commerce Manila, Tech. Bull. 6, p. 232, 1937 (reference).

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Gobius (Gnatholepis) knighti Beaufort,
Bijdr. Dierk. Amsterdam, vol. 19, p.
138, 1913 (Saonek, Waigiu).

Gobius knighti Irimiyama, Jap.
Journ. Zool., vol. 7, no. 1, p. 72, fig. 24,
1936 (Hatezoyo-jima, Idu-siti-to).

(Gnatholepis samoensis Jordan and
Seale, Bull. Bur. Fisher., vol. 25,
p. 396, 1905 (1906) (name in text =
Gnatholepis deltoides Jordan and
Seale).

(Ctenogobius caninus (not Valenciennes) Jordan
and Seale, Proc. U. S. Nat. Mus., vol. 28,
p. 796, 1905 (Negros). ~~Antipodes~~

Depth $4\frac{2}{5}$ to $4\frac{6\frac{1}{2}}{3\frac{1}{4}}$; head $3\frac{1}{4}$ to $3\frac{5\frac{1}{2}}{8\frac{1}{2}}$,
width $1\frac{3}{5}$ to $1\frac{3}{4}$. Snout $2\frac{7}{8}$ to
 $3\frac{3}{4}$ in head; eye $3\frac{1}{4}$ to 4, $1\frac{1}{5}$
in snout, greatly exceeds interorbital;
maxillary reaches opposite front
eye edge to $\frac{2}{5}$ in eye, length $2\frac{4}{5}$
to $3\frac{1}{5}$ in head; mouth subhori-
zontal, jaws even or lower shorter;
teeth fine, simple, conic, in bands
in jaws, outer row but little
enlarged, especially lower, which
with antero-lateral canine curved
back each side; tongue notched in
front; interorbital narrowly
concave, 8 or 9 in head. Gill rakers
 $1+4$, lanceolate, $\frac{2}{5}$ -gill filaments,
which $1\frac{2}{3}$ in eye.

Scales ~~26~~⁵⁷ to 31 in lateral
series to caudal base and 2 or 3
more on latter; 10 transversely;
8 or 9 predorsal forward to eyes.
Cheek and opercle scaly, muzzle
naked. Scales with 6 to 11 basal

Caudal brown, with dozen or more -dark transverse streaks.

Pectoral with fine alternating waved white and brown transverse bands or lines.

East Indies, Philippines, Japan, Melanesia, Polynesia, Micronesia, Hawaii.

Synodus lacertinus Gilbert, Proc. U. S. Nat. Mus., vol. 13, 1890, p.

5 (type locality,

-Norman, Proc. Zool. Soc. London, 1935, p. 108 (Cocos I.?).

845
Four examples. Below mouth of
Cotabato River, Cotabato, Mindanao.
May 20, 1908. Length 42 to 48 mm.

Olive above, paler below.
Upper surfaces variegated with
darker.

Cocos - Keeling Islands, Malaya,
East Indies, Hawaii.

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^{June}
Eighteen examples. Batan Island.
Tide pools. June 5, 1909. Length 15 to
45 mm. [1608]
1604,

Twenty-four examples. Batan Island.
Tide pools. July 22, 1909. Length
22 to 47 mm.

Eleven examples. Cebu market.
March 22, 1909. Length 32 to 60 mm.

Two examples. Cebu market.
April 7, 1908. Length 38 or 39 mm.

14196, 14197. Cebu market.
August 24, 1909. Length 65 to 71 mm.

One example. Cebu market.
August 29, 1909. Length 19 mm.

One example. East side Tagbalaran
Strait, Bohol Island. April 9, 1908.
Shore seine. Length 43 mm.

Thirty-four examples. Mactan,
tide pools. August 31, 1909. Length
21 to 39 mm.

Eight examples. Hasipet, Mindanao.
Tide pool. August 1, 1909. Length
26 to 39 mm.

One example. Mahinog, Camiguin Island.
Tide pools. August 3, 1909. Length 45 mm.

radiating striae, - of which 1 to 4 more above or below, apical denticles 16 to 19 + 17 to 21, circuli fine.

D. VI, I, ^{or 11}10₁ third spine 1 1/2 to 1 4/7 in head, second dorsal height 1 1/5 to 1 1/4; A. I, 10, I to I, 12, I, fin height 1 1/2; caudal I, rounded behind; least depth of caudal peduncle 2 1/3 to 2 1/2; pectoral 1 to 1 1/5, rays 16; ventral rays I, 5, fin I in head.

Brown, paler to whitish on under surfaces. Dark brown streak from lower eye edge down over cheek, behind maxillary. Iris mottled brown. First dorsal with 3 or 4 horizontal brown bands. Soft dorsal brown on membranes, broken as blotches on fin terminally, especially in front. Anal brown, darker terminally.

Three examples. Maactaan Island.
Tide pool. August 31, 1909. Length
33 to 39 mm.

848

Three examples. Hogas Point,
Panay. February 4, 1908. Length 40
or 41 mm.

19521. Pandanon Island. March
24, 1909. Length 56 mm.

Two examples. Pitas Island.
September 12, 1909. Length 26 to 52
mm.

Two examples. Pandanon Island.
March 23, 1909. Length 44 to 58 mm.

Two examples. San Pascual. Tide
pool. March 8, 1909. Length 30 to 40
mm.

Two examples. Simaluc Bisibisi
Island. September 23, 1909. Length
42 to 55 mm.

One example. Zamboanga, Little Santa
Cruz Island. May 26, 1908. Length
34 mm.

Hogar

~~One example. [1608]. Batan Island.
Tide pool. June 5, 1909. Length
45 mm.~~

~~One example. East side Tagbalaran
Strait, Bohol Island. April 9, 1908.
Shore seine. Length 43 mm.~~

~~One example. Reef opposite Cebu,
Cebu Island. April 5, 1908. Length
21 mm.~~

~~One example. Reef opposite Cebu.
April 5, 1908. Length 26 mm.~~

~~One example. Mahinog, Camiguin
Island. Tide pools. August 3, 1909.
Length 45 mm.~~

~~One example. Little Santa Cruz
Island, Zamboanga. May 26, 1908.
Length 34 mm.~~

~~Two examples. Pandanon Island.
March 23, 1909. Length 44 to 58 mm.~~

~~One example. [1604.] Batan Island,
Tide pool. June 5, 1909. Length 42 mm.~~

~~Four examples. Cotabato, below
mouth of Cotabato River, Mindanao.
May 20, 1908. Length 42 to 48 mm.~~

Two examples. Great Tobea⁸⁵⁰
Island. Tide pool. December 15,
1909. Length 45, to 47 mm. [2159.]

Ten examples. Basa Reef,
Gulf of Boni, Celebes. December 17,
1909. Length 33 to 48 mm.

Depth $5\frac{1}{2}$ to $6\frac{1}{2}$; head $4\frac{1}{2}$ to $5\frac{1}{2}$, width 2. Snout convex, blunt; eye 3 to 4 in head, greatly exceeds interorbital; maxillary not quite reaching eye; teeth in bands in jaws, outer row little enlarged, and lateral canine each side medially in lower jaw; interorbital very narrow.

Scales 25 or 26 in lateral series. Top of head, preopercle and upper part of head scaly.

D. VI, I, 10 or 11, fins very close, first dorsal little lower than second dorsal; A. I, 11 or 12, like second dorsal; caudal convex behind, slightly longer than head; pectoral longer than head, rounded; ventral little shorter than pectoral, though longer than head.

U. S. N. M., no. 15399. Honolulu,
Hawaiian Islands. Dr. J. H. Streets.
Length 32 to 43 mm. Four examples.
As Acentrogobius ophthalmotaenia.
These are wrongly included in the
synonymy of Gobiichthys papuensis
(Valenciennes) in my Fishes of Oceania.

U. S. N. M., no. 92271. Konehal
Bay, Oahu. July 1930. Length 65
to 76 mm. Two examples. As
Gobiichthys lanchotus.

U. S. N. M., no. 51163. Waikiki beach,
Oahu. June 11, 1901. U. S. Fish
Comm. Two examples. Length 60
mm. As Gobichthys lonchotus.

U. S. N. M., no. 78072. Hawaiian
Islands. U. S. Fish Comm. Length
31 to 56 mm. Twenty-two examples.
D. VII 12; A. 12; Scales 27 or
28 in lateral series.

Gobius apogonius Cantor

854

Gobius apogonius Cantor, Journ.
Asiatic Soc. Bengal, vol. 18, pt. 2,
p. 1164, 1849 (1850) (type locality,
Pinang). — Günther, Cat. Fish.
Brit. Mus., vol. 3, p. 28, 1861 (types).
— Fowler, ^{List} ~~Cat.~~ Fish. Malaya, p.
216, 1937 (reference).

— Károli, Termesz. Füzetek, Budapest,
vol. 1, p. 164, ¹⁸⁸¹ (1882) (Bangkok). —
Swatti, Index Fish. Siam, p. 152,
1936 (reference).

Depth $3\frac{1}{2}$ in total length;
head 4, depressed. Muzzled broad,
rounded; eye 4 in head, equals
interorbital; mouth cleft oblique,
reaches $\frac{1}{2}$ in orbit, lower jaw
slightly projecting beyond upper;
teeth 7 in both jaws velvety,
outer upper series of a few
distant teeth slightly larger
than rest, and below similar
internal series of which 2 nearest
symphysis have appearance of
small canines; tongue thin, narrow,
crescent shaped, smooth.

Scales 25 in lateral series;
10 transverse. Scales generally
very large, particularly on crown
of head and opercles finely ciliated
and striated.

D. VI - I, 7, fourth spine ends
in filament and slightly exceeds
greatest body depth; A. I, 8, sixth
divided ray, also of second dorsal
6 in total body length; caudal 4,

8546

rounded; pectoral rays 18, fin rounded, nearly long as caudal, upper rays silk like or filamentous; ventral rays I, 5, fin little pointed, scarcely $\frac{1}{2}$ of pectoral.

Back brownish, sides and abdomen buff, opercles minutely dotted with black. Back and sides with 5 or 6 parallel, sometimes interrupted series of black spots. Iris pale golden, spotted with black. On first dorsal 2 elongated black spots, of which posterior between fourth and fifth rays. Second dorsal and anal with 2 or 3 transverse series of black spots, and with their free margins black. Caudal edged with black with a number of somewhat irregular transverse series of black spots. Ventrals with ends of 2 central rays (the fifth) black.

4 *Acantholepis margaritifera* new species -

4 Depth $4\frac{1}{2}$ to $4\frac{3}{5}$; head $3\frac{1}{3}$ to $3\frac{2}{5}$, width $1\frac{4}{5}$ to 2. Snout 4 to $4\frac{1}{2}$ in head; eye $3\frac{3}{4}$ to 4, greater than snout and greatly exceeds narrow interorbital; maxillary reaches $\frac{1}{2}$ in eye, length 3 in head; teeth simple, conic, close set, in narrow bands in jaws; interorbital very narrow low ridge, width $\frac{1}{4}$ of eye; long, conspicuous preopercular spine subequal with to slightly longer than eye. Gill opening lateral slit, about $2\frac{1}{2}$ in head.

Scales 20 or 21 + 2 in axial lateral series from behind suprascapula; 9 transversely above anal origin. Head, chest, breast, prepectoral and predorsal regions naked. Scales with 9 to 15 basal radiating striae; 25 to 36 apical denticles, uniserial, graduated larger laterally; circuli very fine.

Length 60 mm. (Cantor, Günther. ^{854c})

In Malaya. Cantor says it is closely allied to Gobius sadanundio Buchanan-Hamilton, in its fin rays, large scales and black markings on fins and body.

G. sadanundio is said to be of strikingly more elongated shape, third spine of first dorsal longest and fourth shorter, not ending in a filament.

and at caudal base medially.
Each scale on side of body with
slightly darker basal spot.
Dark brown shade on cheeks
below eye. Side of head, pre-
pectoral region and whole side
of body more or less, with small
round pearl blue spots, those on
head and anterior part of body
little ocellated with narrow brown
line. Fins all gray white, with
dark blotches on back reflected on
bases of dorsals. Iris gray
white.

Philippines. A handsome ornate
little fish, remarkable not only
for its long preopercular spine
but its filamentous fins as
well.

U. S. N. M., No. 99047. Masapit, tide pool,
Mindanao. August 1, 1907. Length 42 mm. Type.

Also the following ~~paratypes~~:
Eighty examples, same data. Length
21 to 40 mm.

Gobius aterrimus (Herre)

855

Ctenogobius aterrimus Herre,

One example. Pangauron River,
Port Caltom, Busuanga Island.
December 16, 1908. Length 36 mm.

One example. Pucot River, Mariveles.
Dynamite. January 29, 1909. Length
48 mm.

Gobius atrichypus Garman

857

Gobius atrichypus Garman, Bull.
Mus. Comp. Zool., vol. 39, p. 233, pl. 2,
fig. 1, 1903 (type locality, Bay of
Moala, East Fiji, in 25 fathoms).

Gobionellus atrichypus Jordan and Seale,
Bull. Bur. Fisher., vol. 25, p. 407, 1905
(1906) (reference).

Ctenogobius atrichypus Fowler, Mem.
Bishop Mus., vol. 25, p. 412, 1928
(copied).

Depth $5\frac{1}{3}$; head $3\frac{1}{8}$. Snout $4\frac{3}{7}$ in head, pointed in profile, subtruncate as seen from above; eye 3 in head, greater than snout, close to one another and close to but not entering upper profile of head; maxillary oblique, reached $\frac{1}{3}$ in eye, length $2\frac{3}{5}$ in head; teeth small, in bands, with 1 or 2 canines at each side above and below; interorbital space very narrow.

Scales 25 in lateral series; 10 transversely. Occiput covered with scales to bridges behind orbits. Scales large, ctenoid, with minute teeth. Opercle scaly.

D. VII-12, second spine $2\frac{1}{4}$ in head, second ray $2\frac{1}{5}$, tenth ray $1\frac{2}{3}$; A. 12, third ray $2\frac{2}{3}$, tenth ray $2\frac{1}{2}$; caudal long, pointed behind, tending in filament, length $2\frac{1}{2}$ in rest of fish; least depth of caudal peduncle $2\frac{7}{8}$ in head; pectoral $1 + \frac{1}{10}$ times head, rays 15, ending in filament

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above fourth or fifth anal ray;
ventral $1\frac{1}{5}$ in head.

Color light brown, fins darker.
A series of small brown spots along
middle of flanks from cheek to
a black spot on bases of median
caudal rays.

Length not given; figure 135 mm.
lang. (Garman.)

Fiji Islands. Only known from
Garman's account.

858

Gobius atripinnatus (H. M. Smith)

Rhinogobius atripinnatus H. M. Smith,
Proc. U. S. Nat. Mus., vol. 79, art. 7,
p. 45, 1931 (type locality, Gulf of
Siam, off Tachin River, Central Siam;
Maenam Chao Phaya; Chantabun River at Lem, Sing)
— Swatti, Index Fish. Siam, p. 154, 1936
(Maenam Can Phaya; Canthaburi R.).

Depth 4, rather plump, moderately compressed; head $3\frac{1}{3}$. Eye little less than 5 in head, equals snout, greater than interorbital; hind angle of jaws under front part of eye; mouth oblique, rather small, lower jaw slightly projecting; teeth in 3 or 4 rows in each jaw, outer row enlarged and wide spaced; large, stout, backward curved lateral canines on each side of lower jaw; tongue truncate at tip.

859

Scales 27 in lateral series; 9 transversely; 25 predorsal scales. extend into interorbital space, Cheek and ~~lower~~ ^{upper} half of opercle with large scales. Prominent lines of mucous pores on head; double row horizontally across middle of cheeks, 3 rows on lower part of cheeks, suborbital row continuous with postorbital row along upper edge of opercle to upper angle of gill opening. D. VI-I, 10, first dorsal rather low, second dorsal like anal, neither when depressed reaching caudal; A. I, 10; paired fins equal head less snout; ventral rather short, reaches $\frac{2}{3}$ to anal.

Body and head light brown, without markings. Muzzle blackish. All fins black except dusky pectorals.

U. S. N. M., no. 90321. Gulf of
Siam off Tachin River, central
Siam. December 14, 1927. Length
60 mm. Type of Rhinogobius
atripinnatus.

861

Gobius atripinnis Fowler

Gobius atripinnis Fowler, Proc.
Acad. Nat. Sci. Philadelphia, vol.
86, p. 81, figs. 21 or 22, 1934 (type
locality, Sander, East Bali).

Depth $4\frac{3}{5}$ to $4\frac{2}{3}$; head 3 to $3\frac{1}{4}$, width $1\frac{1}{2}$ to $1\frac{3}{5}$. Snout 4 to $4\frac{1}{2}$ in head from snout tip; eye $4\frac{1}{2}$ to $5\frac{4}{5}$, 1 to $1\frac{1}{2}$ in snout, 1 to $1\frac{1}{4}$ in interorbital; maxillary reaches $\frac{1}{5}$ to $\frac{3}{5}$ in eye, very oblique, length 2 to $2\frac{3}{4}$ in head from snout tip; lips rather broad, fleshy; teeth moderate, simple, conic, above outer row little larger and transversely 2 or 3, below similar with 2 or 3. transversely and nearly uniform; tongue obtuse, fleshy, thick; interorbital $4\frac{3}{5}$, low, level. Gill rakers 3 + 2, lanceolate, robust, $\frac{1}{3}$ of gill filaments, which $1\frac{1}{5}$ in eye.

Scales 30 in lateral series to caudal base and 3 more on latter; 13 transversely at anal, 10 or 11 predorsal forward opposite hind preopercle ridge. Head and occiput entirely naked. Scales with 25 to 32 basal radiating striae;

8616

42 short, slender apical denticles; circuli very fine.

D. VII - I, 10, I, third spine 2 to $2\frac{1}{5}$ in total head length, first branched ray $2\frac{1}{5}$ to $2\frac{1}{3}$; A. I, 8, I, fifth branched ray 2 to $2\frac{1}{5}$; least depth of caudal peduncle $2\frac{1}{5}$ to $2\frac{7}{8}$; caudal $1\frac{1}{5}$ to $1\frac{1}{4}$, rounded; pectoral $1\frac{1}{5}$ to $1\frac{2}{3}$, rays 17 of which 2 uppermost slender, detached and silk like; ventral $1\frac{3}{5}$ to $1\frac{3}{4}$ in total head length. Anal papilla $\frac{1}{2}$ of eye.

Brown, more or less uniform and deeper tints about jaws and interorbital. Slightly darker bars radiate from eye in orbital socket. Opercle and edge of gill opening broadly gray brown. Vertical fins and ventrals blackish though caudal more or less dark gray with 5 transverse black bands. Pectoral like caudal but with base largely blackish with transverse black bands

5 or 6.

86/c

South East Bali. Approaches Gobius cauerensis Bleeker in the possession of several of the lower posterior teeth suggestive of canines, in that they are slightly enlarged or at least a little outstanding or conspicuous. G. cauerensis differs, however, in larger scales (25 to 27) and more branched anal rays (11 or 12), besides coloration.

A. N. S. P., No. 56285. Sander,
South East Bali. November 1932.
R. M. de Schauensee. Length 61 mm.
Type.

A. N. S. P., No. 56286. Sander,
November 1932. R. M. de Schauensee.
Length 44. Paratype.

962

Gobius australis (Ogilby)

Gillichthys

~~Gobius~~ australis Ogilby, Proc. Linn.
Soc. New South Wales, ser. 2, vol. 9,
pt. 2, p. 367, Dec. 10, 1894 (type locality,
Jervis Bay, New South Wales).

(Sans Souci, Botany Bay).

Records Austral. Mus., vol. 11, no. 7, p. 187, pl. 31, fig. 3, Feb. 20, 1917.

Gobius australis McCulloch, Austral.
Mus. Mem., no. 5, pt. 3, p. 372, Nov. 28,
1929 (reference).

Astreogobius australis Whitley, Australian
Zoologist, vol. 6, pt. 2, p. 123, Jan. 14, 1930
(reference).

Gobius baliuroides Bleeker ⁸⁶³

Gobius baliuroides Bleeker, Verh.
Batavia. Genoot. (Blenn. Gob.), vol.
22, p. 26, 1849 (type locality).

One example. Ragay Bay, Ragay
Gulf, Luzon. dynamite. March 10,
1909. Length 28 mm.

765

Gobius baliurus Valenciennes

Gobius baliurus (Kuhl and Van
Hasselt)^{Valenciennes} ~~Hasselt~~ Nat. Poiss., vol. 12,
p. (46) 61, 1837 (type locality,
none given [= Java]). — Bleeker,
Verh. Batavia. Genoot. (Blenn.
Gob.), vol. 22, p. 15, 1849 (Batavia);
Act. Soc. Sci. Ind. Neerl. (Dert.
Celebes), vol. 8, p. 43, 1860 (Celebes).
Verslag. Kon. Akad. Wet. Amsterdam,
vol. 12, p. 56, 1861 (Singapore).
— Günther, Cat. Fish. Brit. Mus.,
vol. 3, p. 18, 1861 (Amboyna). —
Bleeker, Ned. Tijds. Dierk., vol. 2,
p. 292, 1865 (Amboyna).

— Weber, Siboga Exped., vol. 57, Fische,
p. 465, 1913 (Bima; Saleyer).

lycodontis chlevastes (Jordan and Gilbert).

Sidera chlevastes Jordan and Gilbert, Proc. U. S. Nat. Mus., vol. 6,
883, p. 208 (type locality, Galapagos Islands).

Gymnothorax chlevastes Jordan and Davis, Rep. U. S. Fish Comm., pt.
6, 1888 (1892), p. 605 (compiled).

Lycodontis chlevastes Jordan and Evermann, Bull. U. S. Nat. Mus., no.
7. pt. 1, 1896, p. 398 (compiled).—Snodgrass and Heller, Proc. Wash. Acad.
Sci., vol. 6, Jan. 31, 1905, p. 347 (compiled).

Depth 6 to 7; head 4, width 2. Eye 4 in head, in second fourth of head length, closely placed; mouth cleft oblique, extends partly below eye; teeth villiform, pluriserial, outer upper series enlarged, none canines.

Scales 30? in lateral series.

D. VI-1, 10, first dorsal high as body depth, second dorsal partly obtuse; A. I, 10, fin acute; caudal ^{5 in body length} quadrate, convex posteriorly; pectoral rays 15, fin $4\frac{1}{2}$ in body length; ventral $5\frac{1}{2}$, rays I, 5. Anal papilla conic, obtuse.

Color of body reddish. At base of caudal fin round brown spot.

Length 65 mm.

(Bleeker.)

East Indies.

868

Gobius bibarbatus Von Bonde

Gobius bibarbatus Von Bonde, Fishes.
Marine Surv. South Africa, ^{Rep. no. 1,} Spec.
Rep. no. 1, p. 28, pl. 6, 1922 (Type
locality, Station 312 Pickle, in 50 fathoms,
off South Africa).

— Barnard, Ann. South African
Mus., vol. 21, pt. 2, p. 825, Oct. 1927
(St. Helena, Saldanha and St.
Sebastian Bays, in 28 to 50
fathoms).

968a

Depth 4 ~~to~~ to 5 (young); head 3 to $3\frac{1}{5}$. Snout $4\frac{1}{3}$ in head from snout tip; eye 4 (young) to 5, subequal with snout, greatly exceeds interorbital; maxillary reaches $\frac{1}{2}$ in eye, length $2\frac{9}{10}$ in head from snout tip; mouth low, but little inclined, lower jaw projecting; lips thick; teeth simple, in bands in both jaws, outer band largest, no canines, ^{tongue free, rounded, truncate} interorbital 2 in eye (young), slightly larger in adult, with eye entering upper profile of head. Lower gill rakers 8.

Scales 56 to 58 in lateral series; 15 or 16 transversely. Head naked, except small scales on nape. Vertical and horizontal series of papillae on cheeks and opercle, a series around preopercle edge continued to lower surface of mandible. Two pores in median line in

8696

interorbital space. Scales ctenoid, (more or less uniform on figure). Two short barbels on chin. Flap on shoulder girdle.

D. VI, I, 13, third spine $1\frac{2}{5}$ in total head length, first branched ray $1\frac{4}{5}$; A. I, 12 or 13, first branched ray $2\frac{2}{3}$; caudal $1\frac{1}{3}$, rounded behind; least depth of caudal peduncle 3; pectoral $1\frac{1}{4}$, rays 21; ventral rays I, 5, fin $1\frac{2}{7}$ in total head length.

Color yellowish or brownish, scales dotted with greenish, also on pectoral base and on fins terminally, opercle and preopercle. Opercle purplish. Vertical fins purplish, with darker cross bars. Paired fins dusky, or pectoral light purplish clouded with darker streaks. Preserved specimens with irregular dark blotches on sides. (Von Bonde, Barnard.)

South Africa. Reaches 130 mm.

869

Gobius bifrenatus Kner

Gobius bifrenatus Kner, Sitzs. Ber.
Akad. Wiss. Wien, vol. 51, p. 502, pl.
7, fig. 3, May 18, 1865 (type locality,
"Sidney"); Reise. Novara, Zool.,
pt. 1, pp. 177, pl. 7, fig. 3, 1865
(type). — ~~Edwards~~ Macleay,
Proc. Linn. Soc. New South Wales,
vol. 5, pt. 4, p. 597, 1881 (Melbourne;
Port Jackson). — Ogilby, Cat. Fish. New
South Wales, p. 35, 1886. — Lucas,
Proc. Roy. Soc. Victoria, ser. 2, vol. 2,
p. 28, 1890. — Waite, Mem. New South
Wales Nat. Club, vol. 2, p. 46, 1904. —
McCulloch and Ogilby, Rec. Austral.
Mus., vol. 12, no. 10, p. 242, 1919 (Sans
Souci, Botany Bay). — McCulloch,
Fish. New South Wales, ed. 3, p.
84, 1934.
Austral. Mus. Mem., no. 5, pt. 3, p. 371, Nov. 28,
1929 (reference);

Chlorophthalmus proridens Gilbert and Cramer.

Chlorophthalmus proridens Gilbert and Cramer, Proc. U. S. Nat. Mus.
vol. 19, 1896, p. 406, pl. 36, fig. 2 (type locality, N. 21° 8' to 21° 9' Lat.
W. 157° 43' to 157° 53' Long., in 298 to 351 fathoms).--Fowler, Mem. Bishop Mus.
vol. 10, 1928, p. 64 (Hawaii); vol. 11, no. 6, 1934, p. 391 (Hawaii).

Arenigobius bifrenatus Whitley, Austral-
ian Zoologist, vol. 6, pt. 2, p. 123, Jan.
14, 1930 (reference).

871

Gobius bifrenatus Klunzinger, Sitzb.
Ber. Kais. Akad. Wiss. Wien, math.-
naturw. Classe, vol. 80, abth. 1, p.
383, 1879 (1880) (Port Philip) (error).

Gobius bassensis Castelnau, Proc. Zool.
Acclimat. Soc. Victoria, vol. 1, p. 123,
1872 (type locality, ~~Melbourne~~
Victoria).

Gobius caudatus Castelnau, op. cit.,
vol. 2, p. 47, 1873 (type locality, Victoria).
— Macleay, Proc. Linn. Soc. New
South Wales, vol. 5^{pt. 4}, p. 600, 1881
(Melbourne). — Lucas, Proc. Roy. Soc.
Victoria, ser. 2, vol. 2, p. 29, 1890.

Gobius filamentosus (not Risso 1826)
Castelnau, Victor. Offic. Rec. Philadelphia
Exhib. (Res. Fish. Australia), p. 19, 1875
(Adelaide, South Australia).

Plotosus anguillaris (Bloch).

Platystacus anguillaris Bloch, Nat. Ausland. Fische, pt. 8, 1794, p. 61, pl. 373, fig. 1 (type locality, not given; collection Herr John).

Plotosus anguillaris Günther, Journ. Mus. Godeffroy, vol. 8, pt. 16, 1909, p. 372 (Society Is.).--Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 63 (compiled).

Depth $5\frac{1}{4}$; head 4. Snout 3 in head from snout tip; eye 4 to $4\frac{1}{2}$, $1\frac{1}{4}$ in snout, closely set; maxillary reaches $\frac{1}{5}$ in eye, length 2 in head from snout tip; mouth oblique, begins in front well below level of lower eye edge, lower jaw slightly protruding; both jaws with band of fine curved teeth, outer row little enlarged, lower little less wide set though more clearly canine-like; eye enters upper profile of head.

Scales 42 to 45 in lateral series; head and prepectoral region naked. Scales larger on body posteriorly, small on caudal base.

D. VII - 11, third spine $1\frac{3}{5}$ ^{in total head length,} first branched dorsal ray $1\frac{3}{4}$; A. 10 or 11, last ray $1\frac{1}{3}$; caudal $2\frac{1}{2}$ in rest of fish, ends in long median point behind, least

depth of caudal peduncle $2\frac{1}{6}$;
pectoral $2\frac{9}{10}$ in fish without
caudal; ventral equals caudal.

Ground color light brown,
in female belly pale yellow anter-
iorly, silver white to vent, and
on under half of body below second
dorsal with variable black streaks
and lines. Behind pectoral base
broad black longitudinal band
below first or to second dorsal,
then above row of blackish spots.
From lower eye edge dark brown
band to mouth angle; a second
back to lower pectoral base; third
postocular to shoulder ending in
large black blotch. Both dorsals with
blackish longitudinal band, little
below middle. Anal border dark.
Caudal with 3 or 4 dark transverse arched
cross bands. Paired fins nearly black
in male, white in female. (Kner.)

New South Wales. Length 90 to
118 mm.

U. S. N. M., no. 59925. Port
Jackson, New South Wales. 1904.
D. G. Stead. Length 88 to 127 mm.
Ten examples.

Gobius balteatus (Herre)

Vaimosa balteatus Herre,

Two ~~one~~ examples. Beach at village
near Chase Head, Endeavour
Strait, Palawan. December 22,
1908. Length $25_{\text{to } 30}$ mm. These
agree in almost every way with
Herre's figure.

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Gobius bikolanus (Herre)

Vaimosa bikolana Herre, (Gobies of
Philippines, p. 151, pl. 11, fig. 2, 1927
(type locality, Barrio Puro,
Legaspi, Albay Province).

Mugilogobius bikolanus Roxas and
Mabitin, Departm. Agric. Comm. Manila,
Techn. Bull. 6, p. 234, 1937 (reference).

Depth $3\frac{1}{5}$ to $3\frac{3}{7}$; head $3\frac{1}{4}$ to $3\frac{1}{3}$,
snout $3\frac{1}{10}$ in head from snout
tip; eye $4\frac{1}{2}$ to $5\frac{1}{5}$, subequal to
 $1\frac{1}{10}$ in snout, eyes contiguous;
maxillary reaches $\frac{1}{2}$ in eye, in
males extending beyond pupil but
not beyond eye; mouth cleft low,
little inclined, lower jaw slightly
protruding; teeth in 3 rows in

Saurus kaianus Günther, Rep. Voy. Challenger, vol. pt. 6, 1880, p. 50,
pl. 23, fig. C (type locality, Ki Islands, in 129 fathoms).

Synodus kaianus Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2, 1903
(1905), p. 588 (Pailolo Channel off northern Maui, in 122 to 178 fathoms).--

Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 65 (copied).--Norman, Proc. Zool.
Soc. London, 1935, p. 113, text fig. 8 A (compiled).

874

each jaw, outer ones scarcely enlarged; eye entering upper profile of head.

Scales 26 in lateral series; 8 transversely, 7 predorsal forward to 8. Opercles covered by 4 large scales.

D. VI — I, 7, first spine $1\frac{1}{6}$ in total head length, first branched ray $1\frac{4}{5}$, penultimate $1\frac{2}{3}$; A. I, 6, first branched ray $2\frac{1}{8}$, penultimate ray $1\frac{5}{6}$; caudal $1\frac{1}{5}$, pointed behind; least depth of caudal peduncle $2\frac{1}{10}$; pectoral $1\frac{1}{2}$; ventral $1\frac{1}{2}$. Anal papilla $2\frac{1}{2}$ in eye.

In alcohol varies from whitish to blackish gray, with 4 more or less evident short broad dorsal crossbands and median lateral row of 4 prominent black spots. Black spot at

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tip of opercle and pectoral
axil. Two spots at caudal
base. Four short black cross
bars on underside, 2 beneath
anal, and 2 on caudal peduncle.
Scales on sides of body more
or less outlined with bands
of dusky spots, their pale centers
forming longitudinal rows be-
tween blackish lengthwise lines.
Sides of head irregularly barred
and spotted. Females much
paler than males. First dorsal
black, or all golden whitish with
a large black spot between fifth
and sixth spines. Second dorsal
alternately crossbarred with black
and golden or clear. Anal black.
Caudal crossbanded alternately
with black and golden or clear.
Pectorals clear or faintly dusky. Ventrals
black or with broad pale margin.

Length 23 to 26 mm. (H.erre)
Philippines.

One example. Iwahig River and
tributaries, Puerta Princesa,
Palawan. April 4, 1909. Length
44 mm.

(Hawaii); Bishop Mus. Bull., no. 22, 1925, p. 23 (Honolulu); no. 38, 1927, p.
7 (Honolulu); Mem. Bishop Mus., vol. 10, 1928, p. 64, fig. 12 (Honolulu; Hilo;
Mangareva; Society Is.; types of *S. dermatogenys*); vol. 11, no. 5, 1931, p.
Charles and Hood Is., Galapagos;
318 (Honolulu); Proc. U. S. Nat. Mus., vol. 80, art. 6, 1931, p. 4 (Nukuhiva);
Mem. Bishop Mus., vol. 11, no. 6, 1934, p. 391 (Hawaii).

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Gobius bivittatus (Herre)

Tamanka bivittata Herre, Gobies of Philippines, p. 224, pl. 17, fig. 4, 1927 (type locality, Hoihow, Hainan).

Depth $4\frac{4}{5}$; head $3\frac{2}{5}$, width $1\frac{1}{5}$. Snout 3 in head; eye 5, $1\frac{3}{5}$ in snout; maxillary reaches $\frac{2}{5}$ in eye, length $2\frac{1}{4}$ in head; mouth low, little oblique, lower jaw slightly inclined, cheeks bulging; eyes entering upper profile of head.

Scales 44 in lateral series; 13 transversely, 22 predorsal forward nearly to eyes. Small scales on opercle and prepectoral.

D. VII I, 7, third spine $1\frac{3}{4}$ in head, first branched ray $2\frac{1}{5}$, last ray 2; A. I, 7, first branched ray $2\frac{3}{4}$, last ray $2\frac{1}{5}$; caudal $1\frac{1}{3}$,

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convex behind; least depth of caudal
peduncle 2; pectoral $1\frac{1}{3}$; ventral
 $1\frac{2}{3}$.

Color in alcohol uniform
brown, darker above on head,
posterior half yellowish brown
beneath. From above preopercle
dark brown slightly convex band
back to base of caudal, continuing
back on fin as blackish line. I
Similar band from under pectoral
to caudal base and on fin as
blackish line. Bands much more
distinct on posterior half of body.
Blackish vertical ~~band~~ mark on
pectoral. Several vague dark
crossbands on anterior half of
trunk. Black bar on upper
margin of caudal, below dark
brown lengthwise stripe. First
dorsal light brown with large
black spot on upper part of

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membrane between fifth and sixth
spines. Second dorsal brown with
darker markings. Other fins
uniform in color with body.

Length 29 mm.

(Herre.)

Hainan, China.

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Gobius bontu Bleeker

Gobius bontu Bleeker, Verh. Batavia.
Genoot. (Blenn. Gob.), vol. 22, p. 27,
1849 (type locality, Madura str.
near Surabaya and Kammal);
(Madura), vol. 22, p. 5, 1849 (Kammal).

— Martens, Preuss. Exped. Ost
Asien, vol. 1, p. 391, 1876 (Singapore).
— Fowler, ~~Plut~~ ^{Plut} Fish. Malaya, p.
217, 1937 (reference).

— Günther, Cat. Fish. Brit. Mus.,
vol. 3, p. 41, 1861 (no locality).

Acentrogobius bonti Koumans, Zool. Meded.
Rijks. Mus. Nat. Hist. Leiden, p. 123, 1935
(types seen).

881

Gobius triangularis Weber

Gobius triangularis Weber, Notes
Leyden Mus., vol. 31, p. 150, 1909
(type locality, Ambon); Siboga
Exped., vol. 57, Fische, p. 467, fig.
91, 1913 (type).

Ctenogobius triangularis Herre, Fish.
Herre Philippine Exped. 1931, p. 86
(1934) (Zolo). — Roxas and Marten,
Departm. Agric. Comm. Manila,
Techn. Bull. 6, p. 227, 1937 (reference).

881a

Depth 6 in length, anteriorly subcylindrical, posteriorly compressed; head $5\frac{3}{4}$, obtusely convex, width 2. Eye $3\frac{1}{2}$ in head, placed posteriorly in front part, close set; mouth cleft oblique, extends below front eye edge; teeth villiform, pluriserial, outer row enlarged, below 2 curved lateral canines.

Scales 30 in lateral series, small on occiput

D. VI - I, 12, lower than body depth, second and third rays (Jaws?) extended in filaments; A. I, 11; second dorsal and anal acute; caudal $4\frac{1}{4}$ in body, acute, rounded. pectoral rays 18 or 19, fin $5\frac{3}{4}$; ventral 7, rays I, 5. Anal papilla oblong, conic.

Body green, ~~caudal~~ ^{along tail} with 5 to 7 series of black spots. Dorsals hyaline, bases with brown spots. Caudal greenish with irregular black spots. Anal base yellow, fin terminally black.

8216
Pectoral and ventral greenish.
Length 72 mm. (Bleeker?)
Java.

D. VI - I, 10, I or I, 11, I, spines flexible terminally and third reaches back to middle of soft dorsal, tenth or eleventh branched ray also extended or ending in long filament which may reach middle of caudal; A. I, 9, I, and last ray filamentous like last dorsal ray or may reach $\frac{1}{3}$ in caudal; caudal subequal in young, to $2\frac{1}{2}$ in rest of fish with age and ending in median filament behind; least depth of caudal peduncle $2\frac{1}{8}$ to $2\frac{1}{2}$ in head; pectoral $2\frac{7}{8}$ to 3 in fish without caudal, rays 15; ventral rays I, 5, fin 3 to $3\frac{1}{8}$ in fish without caudal.

Pale brown, whitish on under surface of head and belly. Top of head with numerous, small, close set slightly darker crowded spots. Along back 7 darker brown blotches, with 5 larger and brighter axial brown blotches on side, last small

Gobius brevirostris Günther

Gobius brevirostris Günther, Cat.
Fish. Brit. Mus., vol. 3, p. 41, 1861
(type locality, China).

Amoya brevirostris Herre, Gobies
of Philippines, p. 226, pl. 18, fig. 1,
1927 (Amoy).

Depth $5\frac{1}{5}$ to $5\frac{2}{5}$; head 4 to $4\frac{1}{10}$,
width $1\frac{1}{4}$ to $1\frac{2}{5}$. Snout $3\frac{1}{4}$ to
 $3\frac{4}{5}$ in head; eye $3\frac{1}{4}$ to $3\frac{4}{5}$, $1\frac{1}{3}$
in snout, greatly exceeds interorbital;
maxillary reaches front eye edge,
length $2\frac{2}{5}$ in head; mouth
terminal, low, slightly oblique;
2 rows of teeth in each jaw,

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outer enlarged, with lateral pair of canines in lower jaw; interorbital $\frac{1}{4}$ to $\frac{1}{3}$ of eye, which enters upper profile of head.

Scales 46 to 48 in lateral series; 16 transversely. Head and nape entirely naked and central naked area extends back to dorsal base. Tiny scales on pectoral base and breast. Body covered with ctenoid scales, largest posteriorly, and along dorsal base much smaller and becoming minute and disappearing above opercles. Two parallel longitudinal rows of minute papillae across middle of preopercle, and vertical and transverse row on opercle.

D. VI - I, 10, second spine $1\frac{1}{5}$ in head, first branched ray $1\frac{7}{8}$, penultimate ray $1\frac{1}{8}$; A. I, 9, first

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branched ray 3, penultimate ray $1\frac{1}{2}$; caudal somewhat pointed, $3\frac{4}{5}$ in rest of fish; least depth of caudal peduncle $1\frac{3}{4}$ in head; pectoral $1\frac{1}{8}$; ventral $1\frac{1}{3}$. Anal papilla very small and slender in male, subglobose in female.

In alcohol uniform brownish, with faint though darker lateral band from pectoral axil to caudal base. Large, vague dusky spot on opercle. Fins uniform in coloration, paler than body. Second dorsal with traces of dark spots. Anal and caudal with blackish margins.

Length 54 to 62 mm. (Herre.)
China.

885

Gobius brocki (Herre)

Vaimosa brocki Herre, Bull. Raffles Mus. Singapore, no. 12, p. 9, pl. 5, May 1936 (type locality, Reef in Singapore Harbor). — Herre and Myers, op. cit., no. 13, p. 40, Aug. 1937 (type).

Depth $3\frac{4}{5}$; head $3\frac{1}{10}$. Snout $3\frac{3}{4}$ in head from snout tip; eye $3\frac{3}{7}$, subequal with snout, enters upper profile of head; maxillary extends just behind hind margin of eye (not quite opposite hind eye edge in figure), length $1\frac{2}{3}$ in head from snout tip, mouth oblique, lower jaw protruding; interorbital equals eye.

Scales 22 or 23 in lateral series to caudal base and 2 or 3 more on latter; 7 transversely, 8 predorsal. Scales large, thin, very deciduous. D. VII — I, 7, third spine $1\frac{3}{4}$ in total head length. first

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branched ray 2; A. I, 8, first
branched ray $2 \frac{9}{10}$, seventh $2 \frac{2}{5}$;
caudal $1 \frac{1}{8}$, ends in median point
behind; least depth of caudal
peduncle $2 \frac{9}{10}$ in head; pectoral
 $1 \frac{2}{7}$, pointed, without detached
free rays; ventral $1 \frac{3}{4}$, anal
papilla 2 in eye, rather pointed.

Color in alcohol very pale
brown, with dusky spot on caudal
base and brown bar over base
of first 3 dorsal spines and
down side to beneath pectoral.
Minute brown specks dusted
over top and sides of head and
trunk, dorsals, anal and caudal.
Other fin colorless.

Length 28 mm. (Herre.)

Singapore. Said to have the
back moderately convex and the
belly greatly distended with
eggs. Dorsals, anals and ventrals
small, and soft dorsal and anal
falling far from caudal base.

Gobius buccatus Valenciennes

Gobius buccatus Valenciennes, Hist.
Nat. Poiss., vol. 12, p. 14 (45), 1837
(type locality, none given; "ap-
portée par Péron"). — Günther,
Cat. Fish. Brit. Mus., vol. 3, p. 14,
1861 (copied). — Mantens, Preuss.
Exped. Ost Asien, vol. 1, p. 391, 1876
(Batjan).

886a

Head 4 in total length, broader than long, over $\frac{1}{3}$ wider than deep. Eye 6 in head, 2 in interorbital. Mouth vertical. Cheeks large, set forth head.

Scales moderate.

D. VI - I, 11; A. I, 10.

Apparently all brown colored, somewhat more fawn colored below. Fins brown. Border of first dorsal pale.

Length 152 mm. (Valenciennes.)

A doubtful species. Valenciennes calls it "Le Gobie a grosses joues" and says "On ignore le lieu précis où il a été pris" though "Cette espèce a été apportée par Péron."

887

Gobius calamianensis (Herre)

Ctenogobius calamianensis Herre,
Fish. Herre Philippine Exped. 1931,
p. 83 (1934) (type locality, Culion).
— Roxas and Martin, Departm.
Agric. Comm. Manila, Techn. Bull.
60, p. 225, 1937 (reference).

Gobius callidus J. L. B. Smith

Gobius callidus J. L. B. Smith,
Ann. Natal Mus., vol. 8, pt. 2, p.
197, May 1937 (on J. L. B. Smith
1936).

Gobius guloxus (not
J. L. B. Smith, Trans. Roy. Soc. South
Africa, vol. 24, pt. 1, p. 49, fig. 2,
1936 (type locality,

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Gobius callivrus (Jordan and Seale)

Gnatholepis callivrus Jordan and Seale, Proc. U. S. Nat. Mus., vol. 28, p. 796, fig. 14, 1905 (1906) (type locality, Negros). — Herre, Gobies of Philippines, p. 130, pl. 9, fig. 2, 1933 (Manila; Cavite; Capi; Ponte-vedra; Istanica; Zamboanga; Sandakan); Fishes Herre 193, Philippine Exped., p. 82, 1934. (Manila; Cebu).

— Suvatti, Index Fish. Siam, p. 155, 1936 (^{Pattani} reference). — Roxas and Marten, Departm. Agric. Comm. Manila, Techn. Bull. 6, p. 232, 1937 (reference).

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Depth $4\frac{1}{2}$ to $5\frac{4}{5}$ ($3\frac{1}{10}$ in spawning female); head 3 to $\frac{1}{5}$. Snout $3\frac{3}{5}$ to $4\frac{2}{3}$ in head; eye $3\frac{1}{2}$ to 4, subequal with snout, greatly exceeds interorbital; maxillary reaches $\frac{2}{3}$ in eye, length 2 in head from snout tip; mouth cleft oblique, begins in front slightly below level of lower eye edge; 4 rows of teeth in each jaw, in outer row largest and fixed, others all depressible; teeth of fourth row next in size but very much smaller, and those of 2 inner rows minute; upper outer row of teeth much larger and more widely spaced than any of others; tongue rounded; interorbital space very narrow, width 5 in eye.

Scales 28 to 30 in lateral series; 10 transversely; 9 or 10 predorsal. Cheeks with 3 rows of large cycloid

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scales, with prominent longitudinal groove below upper row; opercles naked below; with 1 or 2 rows of cycloid scales along upper margin; few cycloid scales on front angle of breast. Body covered with large ctenoid scales, extending forward on nape between hind part of eyes.

D. VI - I, 10, first spine $1\frac{9}{10}$ in total head length, seventh branched ray $1\frac{2}{5}$; A. I, 9, seventh branched ray $1\frac{1}{2}$; caudal $1\frac{1}{3}$, convex behind; least depth of caudal peduncle $2\frac{3}{5}$; pectoral $1\frac{1}{3}$; ventral $1\frac{1}{2}$. Anal papilla long, slender, pointed, length $1\frac{1}{3}$ in eye; in females short, broad, cylindrical, round tipped, less than pupil.

In alcohol pale brown above, merging into white below. Whittish spot in center of each

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brown scales, spots forming
longitudinal lines. Large, nearly
circular, blackish spot on
caudal peduncle base and 4
similar much paler spots along
median lateral line, anterior
one beneath pectoral and in
line with first dorsal. In some
specimens these spots connected
by blackish line. Large dusky
iridescent silvery spot on opercle
before pectoral. Upper part of
eye covered by heavily pigmented
blackish band, pupil white,
cornea with more or less blue
iridescence. Dorsals and anals
sprinkled with minute specks
of dark brown. Caudal dusky,
with several white crossbars or
rows of spots. Pectoral base
with dusky spot on upper part.
Paired fins faintly marked with
dusky specks or central part

of ventrals blackish.

Length 43 to 77 mm. (Herre.)

Philippines, Siam.

893

Gobius caninoides Bleeker

Gobius caninoides Bleeker, Nat.
Tijds. Ned. Indie, vol. 3, p. (235) 274,
1852 (type locality, Amboina);
vol. 11, p. 385, 1856 (Kajeli, Buru);
Act. Soc. Sci. Ind. Nedl., vol. 1,
no. 3, p. 9, 1856 (Macassar); vol. 2,
no. 7, p. 6, 1857 (Amboina); Nat.
Tijds. Ned. Indie, vol. 22, p. 108,
1860 (Muntok, Banka), ^{Günther, Cat. Fishes Brit. Mus., vol. 2, p. 36, 1861 (Cope).} Verslag.
Kon. Akad. Wet. Amsterdam, ser.
2, vol. 7, p. 36, 1873 (Am Ind.).

Depth $5\frac{1}{2}$ to 6 in total length; head $4\frac{1}{2}$, width $1\frac{2}{3}$ to 2. Snout obtuse convex, shorter than eye; 3 to $3\frac{1}{3}$ in head, advanced in head, very close to opposite eye; mouth oblique, reaches below front edge of eye, jaws equal; teeth small, in several series, outer row larger; 2 small curved canines in lower jaw; post-ocular groove distinct.

Scales 30 in lateral series.

D. VI - I, 10 or I, 11, first dorsal rounded and median spines longest, second dorsal angular; A. I, 10 or I, 11; caudal rounded, length $5\frac{1}{2}$ to 6 in body; vertical fins subequally high, lower than body, rays not produced; pectoral rays I, 17, rounded; ventral I, 5, rounded. Anal papilla conic, obtuse.

Color of body green. Many scales of back and sides each with blackish dot, forming more or

less longitudinal rows on sides.

Dorsals and caudal with black spots, on first ^{dorsal} fin in 2 longitudinal series, on second dorsal fin in 3 longitudinal series; on caudal in 4 or 5 transverse series and fin margined with violet posteriorly. Fint largely yellowish otherwise. Anal violet.

Length 55 to 80 mm. (Bleeker.)

Gobius caninus Valenciennes

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Gobius caninus Valenciennes, Hist. nat.

Poiss., vol. 12, p. (65) 86, 1837 (type locality, Java); — Günther, Cat.

Fish. Brit. Mus., no. 4, p. 18, 1869

vol. 3, p. 38, 1861 (China); — Bleeker, Verh. Konink. Akad. Wet. Amsterdam, ser. 2, vol. 2, p. 293, 1868 (Bintan).

— Schmeltz, Cat. Mus. Godeffroy, no. 4

p. 18, 1869 (Namusi). — Bleeker,

Ned. Tijds. Dierk., vol. 4, p. 128, 1874

(Macao; Amoy); — Martens, Preuss. Exped. Ost Asien, vol. 1, p. 391, 1876 (Singapore).

— Günther, Journ. Mus. Godeffroy, vol.

7, pt. 11, p. 175, pl. 109, fig. C, 1877

(west Polynesia); — Fowler, Mem.

Bishop Mus., vol. 10, p. 404, 1928 (reference).

— Tomiyama, Jap. Journ. Zool., vol. 7, no. 1,

p. 70, 1936 (Hainan, China).

— Károli, Termesz. Füzetek, Budapest, vol. 5, p. 164,

(1882) (Selita). — Weber, Siboga Exped., vol.

57, Fische, p. 461, 1913 (Bima; Makassar).

— Bleeker, Verh. Batavia. Genoot. (Nijl. Plenn.

Gob.), vol. 22, p. 27, 1849 (Batavia; Cheribon; Tjilatjap;

Samarang; Surabaya; Rammal).

297

Otenogobius caninus Jordan and
Seale, Proc. U. S. Nat. Mus., vol. 28,
p. 796, 1905 (Negros). — Jordan and
Richardson, Bull. Bur. Fisher., vol.
27, p. 277, 1908 (Pinang; Lubang). —
Snyder, Proc. U. S. Nat. Mus., vol. 42,
p. 514, 1912 (Kaha, Olsinawa).

— Roxas and Marton, Departm. Agric.
Comm. Manila, Techn. Bull. 6, p. 225,
1937 (reference).

— Bleeker, Nat. Geneesk. Arch. Ned. Indië,
vol. 2, p. 514, 1845 (Batavia);
Verh. Batavia. Genoot. (Blomm. Yob.),
vol. 22, p. 27, 1849 (Batavia, Cheribon,
Tjilatjap, Samarang, Surabaya,
Kannal); (Bijdr. Madura), p. 5, 1849
(Madura); (Bijdr. Ind. Oost-Java), p.
9, 1850; Nat. Tijds. Ned. Indië,
vol. 2, p. 472, 1851 (Rionw); vol. 3,
p. 275, 1852 (Moluccas); vol. 12, p. 215,
1856-57 (Nias); vol. 16, p. 408, 1858-59
(Japara); Act. Soc. Sci. Ind. Néerl.
(Dert. Celebes), vol. 8, p. 43, 1860 (Celebes);
Verslag. Kon. Akad. Wet. Amsterdam,
vol. 12, p. 56, 1861).

Gobius caginus Mayer, Anal. Soc. Españ.
Hist. Nat. Madrid, vol. 14, p. 29, 1885
(Cebu) (error).

Ophiocara melanostigma (Bleeker)

Eleotris melanostigma Bleeker, Verhand.
Batavia. Genoot. (Blenn. Gob.), vol.
22, p. 23, 1849 (type locality, Fretto
Madurae prope Surabaya et
Kammal); (Midd. Oost-Java), vol. 23,
p. 9, 1850 (Java); Nat. Tijds. Ned. Indië,
vol. 1, p. 3, 1851 (Borneo), p. 261 (Borneo);
vol. 2, p. 59, 1851 (Borneo), p. 195
(Borneo), p. 419 (Borneo); vol. 3, p.
512, 1852 (Borneo). — Günther, Cat.
Fish. Brit. Mus., vol. 3, p. 117, 1861
(copied). — Károli, Termész. Füzetek,
Budapest, vol. 5, p. 167, 1881 (1882)
(Mutang, Siminju).

Gobius (Rhinogobius) caninus⁸⁹⁶
Rendahl, Arkiv för Zool., Stock-
holm, vol. 18, no. 2, p. 19, 1924
(China).

One example. Port Matalvi, Luzon
Island. Seine 130 feet. November
23, 1908. Length 31 mm.

898

Gobius (Rhinogobius) caninus Rendahl,
Arkiv för Zool., Stockholm, vol. 18, no.
2, p. 19, 1924 (China).

Acentrogobius caninus Snyder, Proc. U. S. Nat.
Mus., vol. 42, p. 514, 1914 (Casha, China).

Rhinogobius caninus Herre, Gobies of
Philippines, p. 186, pl. 13, fig. 4, 1927
(Amoy). — Reeves, Journ. Pan-Pac.
Res. Inst., vol. 2, no. 3, p. 13, July-Sep.
1927 (reference). — Chu, Biol. Bull.
St. John's Univ., no. 1, p. 162, Jan. 1,
1931 (reference). — Fowler, Hong Kong
Nat., vol. 2, no. 4, p. 310, Nov. 1931 (Hong
Kong).

Acentrogobius caninus Suwatti, Index Fish.
Siam, p. 155, 1936 (Pak Phayun; Bangpa-
lang R.; Maenam Cau Phaya; Canthaburi
Estuary; Pattani; Songkhla; Tha-cin R.).

899

Gobius grandinosus (Valenciennes) Eydoux and
Souleyet, Voy. Bonite, Zool., vol. 1, p. 177, pl. 5,
fig. 4, 1841 (type locality, "mers de la Chine à Macao").

Gobius caninus varietas africana
Thunberg, Fishes of Zanzibar, p. 71,
Atlas (pl. 9, fig. 1) 1866 (type
locality, Zanzibar, entering rivers).

(Hawaii).

900

Coryphopterus bernadoni Jordan and Starks, Proc. U. S. Nat. Mus., vol. 28, p. 207, fig. 9, 1905 (type locality, "probably Korea").

Ctenogobius bernadoni Jordan and Metz, Mem. Carnegie Mus., vol. 6, no. 1, p. 55, fig. 55, June 1913 (copied).

Rhinogobius similis (not Gill) H. M. Smith, Proc. U. S. Nat. Mus., vol. 79, art. 7, p. 43, 1931 (type locality, Bandan Bight, Gulf of Siam) (young).

Rhinogobius simulans H. M. Smith, Copeia, no. , p. 64, 1931 (proposed to replace R. similis H. M. Smith). — Suwatti, Index Fish. Siam, p. 154, 1936 (reference).

Snyder, Proc. U. S. Nat. Mus., vol. 42, p. 514, 1912 (habitat).

Rhinogobius caninus magnisquam-
atus Herre, Gobies of Philippines, p. 188, 1927 (type locality, Malabon, Rizal Province, Philippines).

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Depth $4\frac{1}{4}$ to $4\frac{3}{4}$; head $3\frac{1}{2}$ to $3\frac{3}{5}$.
width $1\frac{1}{5}$ to $1\frac{2}{5}$. Snout 3 to $3\frac{1}{8}$
in head from snout tip; eye $4\frac{2}{5}$
to $4\frac{3}{4}$, $1\frac{1}{2}$ in snout, greater than
interorbital; maxillary reaches
opposite front eye edge, length $2\frac{1}{2}$
in head from snout tip; mouth
cleft low, little inclined, mandible
slightly protruded; teeth very fine,
in bands in jaws, outer row
little enlarged and wide spaced,
and 2 close set canines each side
medially in lower jaw; interorb-
ital space 2 in eye, which nearly
enters upper profile of head.

Scales 28 to 30 in lateral
series; 10 transversely, 16 to 24
predorsal forward to eyes. Few
small scales on opercle above,
also on prepectoral region in
some specimens. Several rows of ^{papilla}
longitudinally on cheeks, also post-

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ocular line; vertical row on front of opercle with several short cross bars. Predorsal scales very small, and small scales on trunk, become large on tail and especially on caudal peduncle.

D. VI, I, 9, I, third spine $1\frac{3}{4}$ to $1\frac{4}{5}$ in total head length, first branched dorsal ray $1\frac{7}{8}$ to 2, penultimate ray $1\frac{3}{4}$ to $1\frac{4}{5}$; A. I, 9, first branched ray $2\frac{7}{8}$ to 2, penultimate ray $1\frac{3}{4}$ to $1\frac{4}{5}$; caudal 1, convex behind; least depth of caudal peduncle 2; pectoral $1\frac{1}{4}$ to $1\frac{2}{5}$; ventral $1\frac{2}{5}$ to $1\frac{1}{2}$.

Color olive or brown above, paler to whitish on under surfaces. Five dark or blackish cross bars on back, first above pre-opercle, second above pectoral base, third at last dorsal spines,

fourth below middle of second dorsal and fifth on caudal peduncle and at bases of last dorsal rays. Along middle of side 5 large blackish spots. Above pectoral origin large dark green spot, usually large as eye and bordered with black. Fins brownish, first dorsal with inclined gray black bands. Caudal often dark gray, also paired fins.

Madagascar, Zanzibar, East Indies, Malay, Philippines, China, Siam, Amur River, Korea?, Polynesia.

Two examples. Cebu market.

March 20, 1909. Length 54 to 69 mm.

Six examples. Cebu market.

March 22, 1909. Length 59 to 81 mm.

One example. Cebu market.

August 28, 1908. Length 67 mm.

19380, 19381. Iloilo market.

March 28, 1908. Length 86 to 112 mm.

Thirteen examples. Iloilo market.

June 1, 1908. Length 57 to 122 mm.

[642]

22566. Malabon market. August

8, 1908. Length 111 mm.

Two examples. Manila, Santa

Cruz market. January 1, 1908.

Length 115 to 122 mm.

6968, 6975 to 6977. Manila

market. April 14, 1909. Length 94

to 113 mm. [1524]

5210, 5211. Manila market. June

11, 1908. Length 78 to 92 mm.

Four examples. Manila market.

June 13, 1908. Length 101 to 133 mm.

9071 to 9074, 9081, 13681, Manila⁹⁰⁵
market, June 24, 1908. Length 72 to
112 mm.

One example, Manila market.
December 12 to 18, 1907. Length 109 mm.

Four examples. Parcol, Malam-
paya Island, Palawan. December
25, 1908. Length 63 to 94 mm.

Twenty-nine examples. San
Pascual, Burias Island. March
8, 1908. Length 19 to 50 mm.

Eight examples. Sebatic Island,
Borneo. October 1, 1909. Length 82
to 116 mm.

13193. Macassar market, Celebes,
Dutch East Indies. December 22,
1909. Length 94 mm.

U. S. N. M., no. 52027. Negros,
Philippines. Dr. Bashford Dean.
Length 82 mm.

U. S. N. M., no. 71436. Kaga,
Okinawa, Ryū Kyū Islands,
Japan. Albatross Collection 1906.
Length 102 mm.

U. S. N. M., no. 72215. Iloilo,
Panay Island, Philippines.
R. C. Mc Gregor. Length 64 to
121 mm. Two examples.

907

Gobius capistratus Peters

Gobius capistratus Peters, Archiv
Naturg., ~~vol. 1~~ pt. 1, p. 251, 1855
(type locality, "Ibo, 12° S. Br.").

— Günther, Cat. Fish. Brit. Mus.,
vol. 3, p. 36, 1861 (copied).

— Sauvage, Hist. Nat. Madagascar,
Poiss., p. 356, pl. 38, fig. 5, 1891 (Madagascar).

— Jatzow and Lenz, Abhandl. Senck-
enberg. Ges., vol. 21, p. 507, 1898 (Zanzibar).

— Norman, Ann. Mag. Nat. Hist.

London, ser. 9, vol. 9, p. 322, 1923

(Natal). — Barnard, Ann. South
African Mus., vol. 21, pt. 2, p. 819, Oct.
1927 (Natal; Ibo; Portuguese East
Africa).

Gobius ophthalmotaenia (not Bleeker)

Playfair, Fishes of Zanzibar, p. 71,
1866 (part; on Peters).

Depth 4 to $4\frac{1}{2}$; head $3\frac{1}{3}$ to $3\frac{1}{2}$.
 Snout $3\frac{3}{4}$ in head from snout
 tip; eye $3\frac{1}{2}$ to 4, subequal with
 snout, very close together; max-
 illary reaches opposite front
 eye edge, length $2\frac{3}{5}$ in head
 from snout tip; ~~mouth~~ oblique,
 begins in front below level of lower
 eye edge; outer row of teeth enlarged,
 and 2 canines on each ^{side of} mandible; eye
 enters upper profile of head.

Scales 31 in lateral series; 9
 transversely.

D. VI I, 12, second spine $1\frac{7}{8}$ in
 total head length, first ray of
 second dorsal 2, last ray $1\frac{1}{4}$;
 A. I, 12, first ray $2\frac{3}{4}$, last ray $1\frac{1}{5}$;
 caudal 1, rounded behind; last
 depth of caudal peduncle 3;
 pectoral 1; ventral $1\frac{1}{8}$.

Greenish, with 5 transverse bands
 on back. 5 regular white spots on
 scales. Black line from eye on postocular.

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Cheek brown, with white spots.
Pectoral base brown, with small
gray spots between bases of rays.
Front part of dorsal, also caudal
fin, with black spots.

Length 62 mm. (Sawage, Barnard.)
Zanzibar, Portuguese East
Africa, Natal:

908

Gobius castelnaui macleay

Gobius castelnaui macleay, Proc.
Linn. Soc. New South Wales, vol. 5, pt. 4,
p. 598, May 20, 1881 (on Castelnaui).
— McCulloch, Austral. Mus.
Mem., no. 5, pt. 3, p. 370, Nov. 28, 1929
(reference).

Gobius frenatus (not Günther)
Castelnaui, Proc. Zool. Acclimat.
Soc. Victoria, vol. 1, p. 123, July 15,
1872 (Hobson's Bay, Victoria).

Gobius frenatus Günther

Gobius frenatus Günther, Cat. Fish.
Brit. Mus., vol. 3, p. 39, 1861 (type
locality, Australia). — McCulloch,
Austral. Mus. Mem., no. 5, pt. 3,
p. 370, Nov. 28, 1929 (reference).

Gobius cavifrons Weber

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Gobius cavifrons Weber, Notes Leyden
Mus., vol. 34, p. 153, 1909 (type locality,
Sula Takome, ^{disbawha,} fresh water lake,
Ternate; Abhandl. Senckenberg.
naturf. Gesell. Frankfurt, vol. 34,
p. 36, 1913 (brook at Gomo-Gomo;
fresh water at Seltutti, Kobroor,
Amu Dr.); Siboga Exped., vol. 57,
Fische, p. 462, fig. 89 (types).

Depth 5; head $3\frac{3}{7}$, width $1\frac{1}{2}$.

Snout 4 in head; eye $3\frac{3}{5}$, greater than snout, equals interorbital; maxillary reaches $\frac{1}{2}$ in eye, length $2\frac{1}{2}$ in head; jaws subequal with snout tip level with lower eye edge; teeth fine, pluriserial, without canines; eye enters upper profile of head.

Scales 45 in lateral series, largest on caudal peduncle and caudal base; 12 transversely, 21 predorsal forward above opercle. Scales ctenoid, anteriorly cycloid. Opercle scaly, head otherwise largely naked. Row of papillae around lower border of eye, above maxillary and parallel behind posterior edge of preopercle.

D. VII—9, third spine $2\frac{3}{5}$ in head, second ray $2\frac{1}{4}$; A. 9, fifth ray $2\frac{1}{5}$; Caudal $3\frac{2}{5}$ in rest of fish, rounded behind;

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least depth of caudal peduncle $2\frac{1}{8}$;
pectoral $1\frac{1}{3}$, rays 16; ventral
rays \overline{I} , 5, fin $1\frac{2}{3}$ in head.

Brown, with darker cross
bands on back and tail obscure.
Head uniform. (Figure shows
oblique black bar from lower
hind edge diagonally across
cheek, also dark line along
upper edge of upper lip.) First
dorsal dotted with blackish,
and blackish longitudinal band
on upper half. Second dorsal
dotted gray, with hyaline edge
around median black blotch
on each membrane, all forming
broad, dark, median band on fin.
Caudal with 4 yellowish cross
bands, alternating more or less
with blackish. Anal and paired
fins dotted gray, first with clear
edge.

Length 40 mm.
East Indies.

(Weber.)

Gobius cheni nichols

909c

Gobius cheni Nichols, Amer. Mus. Novit., no. 499, p. 1, Oct. 6, 1931 (type locality, Hokow, northeastern Kiangsi).

Depth $6\frac{4}{5}$ to $7\frac{1}{2}$; head, $3\frac{3}{5}$ to $3\frac{4}{5}$, width $1\frac{7}{10}$, of head depressed and lower surfaces flattened. Snout $3\frac{1}{5}$ in head; eye $4\frac{4}{5}$ to $5\frac{3}{5}$, superolateral, close together; maxillary reaches under front of pupil, length $2\frac{3}{5}$ in head; mouth almost horizontal, lower jaw projecting; no canine teeth; interorbital $2\frac{7}{10}$ in eye. Gill opening extends forward below hind preopercle edge.

Scales $3\frac{4}{5}$ to $4\frac{1}{5}$ in lateral series.

Scales suppressed or absent on breast, head, nape and midline of predorsal.

D. VI-9, origin of first dorsal equidistant from snout end and middle of anal base, longest spine $2\frac{2}{5}$ in head, longest ray $2\frac{1}{5}$; A.

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8 or $8\frac{1}{2}$ [9], longest ray $2\frac{1}{3}$; caudal
 $1\frac{2}{5}$, rounded, subacuminate;
pectoral $1\frac{2}{5}$, reaches $\frac{2}{3}$ to anal,
(least depth of caudal peduncle 3;)

much beyond ventrals; ventral $2\frac{1}{5}$,
united, form almost circular disk.

Head, back and sides with
blackish spots. Row of 9 irregular
(black) blotches mostly slightly
below middle of side. Dorsals
spotted and caudal with 5 or 6
irregular cross bars. Pectoral
with dark spot on base and
closely followed by a short, and
then a larger more diffuse bar.

Length 47 to 55 mm. $\frac{1}{2}$ without
caudal. (Nichols.)

China. Gobius hadropterus differs
in depth $4\frac{1}{3}$ to 5, predorsal completely
scaled and lateral scales 30 to 32.

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Gobius chiengmaiensis (Fowler)

Rhinogobius chiengmaiensis Fowler, Proc.
Acad. Nat. Sci. Philadelphia, vol.
86, p. 157, fig. 126, 1934 (type locality,
Chiengmai, North Siam). — Suwatke,
Index Fish. Siam, p. 154, 1936
(reference).

Depth $4\frac{7}{8}$ to $5\frac{1}{5}$; head $2\frac{7}{8}$ to $3\frac{1}{5}$, width $1\frac{1}{3}$ to $1\frac{1}{2}$. Snout $3\frac{1}{4}$ to $3\frac{2}{5}$ in head from snout tip; eye $3\frac{4}{5}$ to 4, subequal with snout, much greater than interorbital; maxillary rather short, reaches opposite front eye edge, length 3 to $3\frac{1}{2}$ in head from snout tip; teeth simple, conic, little curved, minute, uniserial in jaws, none on palate or tongue; tongue not distinct or little free from floor of mouth; interorbital $\frac{2}{5}$ of eye, low, depressed or level. Gill rakers 1 + 4, short points about $\frac{1}{2}$ of gill filaments, which nearly $\frac{1}{3}$ of eye.

Scales 26 or 27 in axial lateral series from over gill opening to caudal base and 2 or 3 more on latter; 8 transversely between dorsal and anal origins; predorsal naked medially, also pectoral base, chest and breast. On fins

only few scales on caudal base.
 Scales with 15 or 16 slightly
 radiating basal striae; 34 or 35
 apical denticles, smaller medi-
 ally; circuli fine, basal.

D. VI-1, 8, spines somewhat
 flexible, third spine $1\frac{7}{8}$ to $2\frac{1}{5}$ in
 total head length, seventh ray
 $1\frac{2}{3}$ to 2; A. I, 7, sixth ray $1\frac{3}{4}$ to
 2; caudal $1\frac{1}{8}$ to $1\frac{1}{5}$, convex be-
 hind; least depth of caudal
 peduncle $2\frac{3}{4}$ to 3; pectoral 3
 to $3\frac{1}{4}$ in combined head and
 body to caudal base; ventral
 $1\frac{1}{4}$ to $1\frac{2}{5}$ in total head.

Pale brownish. Along side of
 body 5 large ill-defined dark
 blotches. Head with obscure
 dark reticulations, also extended
 on predorsal. Obscure dark spots
 on cheeks, fewer on snout above.
 Iris slate gray. Fins largely
 uniformly pale. Spinous dorsal
 with black spot, nearly large

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as eye, another on fin, also numerous other smaller and lighter dark spots. Soft dorsal with 4 rows of dark spots, caudal with 5, which form more or less transverse bands. Anal pale basally, with submarginal blackish slate band, edge of fin narrowly whitish. Fluvial fins uniformly pale, dusted obscurely with minute brownish dots.

Northern Siam.

A. N. S. P., No. 59774. Chiang Mai, North Siam. December 30, 1932. R. M. de Schauensee. Length 29 mm. Type.

A. N. S. P., Nos. 59772 and 59773. Chiang Mai. December 1932. R. M. de Schauensee. Length 33 to 35 mm. Paratypes.

911

Gobius chinensis Osbeck

Gobius chinensis Osbeck, Reise China
öst Ind., p. 340, 1771 (type locality,
Canton).

- Valenciennes, Hist. Nat. Poiss., vol. 12,
p. 138, 1837 (on Osbeck).
(104)
- Richardson, Ichth. China and Japan,
(Günther, Cat.
p. 204, 1846 (Macao)). —
- Fish. Brit. Mus., vol. 3, p. 37, 1861
(China). — Bleeker, Ned. Tijds.
Dierk., vol. 4, p. 128, 1874 (reference).
- Rendahl, Arkiv för Zool., Stockholm,
vol. 16, no. 2, p. 19, 1924 (reference).
- Chu, Biol. Bull. St. John's Univ.,
no. 7, p. 160, Jan. 1931 (reference).

Depth $5\frac{1}{4}$; head $4\frac{3}{4}$, broad as high or $\frac{1}{4}$ longer than broad. Snout obtuse, rounded, longer than eye; eye 6, equals interorbital; mouth oblique, lower jaw somewhat prominent.

Scales 35 in lateral series; 13 between second dorsal and anal fins. Nape and upper part of opercle covered with small scales. Cheeks with series of minute warts.

D. VII - 11, fins lower than body depth and rays of second gradually longer posteriorly; A. 10; caudal somewhat pointed; none of pectoral rays silk-like.

Yellowish in spirits, with very indistinct darker markings, many scales with a shining pearl-colored spot.

Length not given. (Günther.)

China.

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Gobius chlorostigmatoides Bleeker

Gobius chlorostigmatoides Bleeker,
(Bleeker, Gob.) vol. 22, p. 26, 1849 (type locality, Madura Strait near
Verh. Batavia. Genoot. (Madura), Surabaya and Kammal);
vol. 22, p. 5, 1849 (~~type locality~~,
Kammal); Act. Soc. Sci. Ind.
Néerl., vol. 3, no. 6, p. 2, 1857-58.
(Sinkawang, Borneo) vol. 8 (Act. Borneo), p. 16, 1860 (Borneo).
Martens,
Preuss. Exped. Ost Asien, vol. 1, p. 391,
1876 (Manila). — Károli, Termesz.
Füzetek, Budapest, vol. 5, p. 165, 1881
(1882) (Sarawak; Palaboen).
(Besch. Moluk.), vol. 1, 1855 p. 51, 1856 (Moluccas).
(Bijdr. ind. Ost-Java), vol. 23, p. 9, 1850.
— Günther, Cat. Fish. Brit. Mus., vol. 3, p. 39, 1861
(copied).

Acentrogobius chlorostigmatoides Koumans,
Zool. Meded. Rijks Mus. Nat. Hist. Leiden, p. 135,
1935 (note).

913

^(part)
Gobius unicolor (Van Hasselt) Valenciennes,
Hist. Nat. Poiss., vol. 12, p. () 88, 1837
(Java).

974

Gobius phaiomelas Bleeker

Gobius phaiomelas Bleeker, Verhand.
Batavia. Genoot. (Blenn. Gob.), vol.
22, p. 28, 1849 (type locality, Madura
straits near Surabaja and Kammal);
Versl. Kon. Akad. Wet. Amsterdam,
vol. 12, p. 32, 1861 (Singapore).
Fowler, ^{List} ~~Cat.~~ Fish. Malaya, p. 218, 1937
(reference).

— Károli, Termesz. Füzetek, Budapest, vol.
5, p. 165, 1881 (1882) (Matang). —

(Madura), vol. 22, p. 5, 1849 (Madura);
(Midd. Oost-Java), vol. 23, p. 9, 1850.
— Günther, Cat. Fish. Brit. Mus., vol. 3,
p. 42, 1861 (copied). — Bleeker,

Depth 6 in total length; head 5, width $1\frac{1}{2}$. Eye 5 in head, at second fourth in head length, equals interorbital; mouth cleft oblique, extends partly below eye; teeth moderate, outer row enlarged, and ^{curved} canine on each side of lower jaw.

Scales 30 in lateral series; small on occiput.

D. VI - I, 11 (Günther in quoting Bleeker gives but 10 dorsal rays), fins lower than body depth; A. I, 10, ~~second dorsal~~ (Günther gives but 9 anal rays); second dorsal and anal acute; caudal obtusely rounded, length 5 times in body length; paired fins each $6\frac{1}{2}$.

Body green, with many bright green spots. Each scale of side with a single brown spot. Second dorsal, anal and caudal variegated with black. Caudal with brown basal spot superiorly. Pectoral green, other fins brownish. Length 85 mm. (Bleeker.)
East Indies.

915

Gobius chulae (H. M. Smith)

Vaimosa chulae H. M. Smith, Journ.

Siam Soc. Nat. Hist., vol. 8, no. 4, p.

260 ^{Pl. 23, lower fig.} June 30, 1932

^{Gulf of Siam} (type locality,
Koh Samui) — Fowler, Proc.

Acad. Nat. Sci. Philadelphia, vol. 89,

p. 251, fig. 262, May 19, 1937 (Tachin).

— Suvatti, Index Fish. Siam, p. 156, 1936

(reference).

Depth 5; head $3\frac{2}{5}$, width $1\frac{1}{2}$.
Snout $5\frac{1}{5}$ in head; eye $4\frac{1}{8}$,
greater than snout, twice bony
interorbital; maxillary reaches
back

little behind hind eye edge, length $2\frac{1}{2}$ in head; mandible included in upper jaw; single row of very small, simple, curved, short, conic teeth along front edge of upper jaw, visible when mouth is closed; front of mandible with 4 large strong conic teeth, and set off near middle of each mandibular ramus several other rather large teeth; tongue adnate in front to floor of mouth, appearing rounded; interorbital width low, depressed, Gill opening lateral, extends forward opposite hind preopercle edge.

Scales $24 + 3$ in median lateral series; 7 transversely between dorsal and anal origins; 11 predorsal scales forward to eyes. Opercles scaly, muzzle, cheeks, interorbital and under surface of head naked. Row of minute close set papillae on suborbitals, close to eye, 3 parallel horizontal rows on cheeks, and row along each lower face of mandibular ramus. Small scales on chest and

breast, belly and caudal base also (918)
scaly. Scales with 15 parallel
slightly converging basal striae; 47
apical denticles; circuli fine.

D. V—I, 7, I, second spine $1\frac{3}{4}$
in head; second dorsal height
 $1\frac{1}{4}$; A. I, 7, I, fin height $1\frac{1}{2}$;
caudal I, convex behind; least
depth of caudal peduncle $2\frac{1}{8}$;
pectoral $1\frac{1}{3}$, rays 15; ventral
I, 5, with even, entire membranous
border in front, fin $1\frac{1}{2}$. Vent
little nearer anal origin than tips
of depressed ventrals, papilla
flattened, pointed, $\frac{1}{2}$ of eye.

Pale brown, each scale on
body with dark basal pocket, and
6 ill defined dark saddle like
blotches down middle of back,
with 5 still paler alternating blotches
axial along side. Head with various
dark spots. Iris gray. Jaws dotted
with gray and branchiostegal region
with blackish gray. First dorsal
with gray brown. Large blackish
blotch on last 2 membranes. Second

dorsal pale, with 5 dark longitudinal bands. Caudal grayish with 5 darker transverse bands and black spot, about size of pupil at bases of upper rays. Pectoral pale, dusted with brownish, and blackish blotch above and another below basally. Ventral rather dark gray, outer border whitish.

Siam. R. M. de Sclauense.

A. N. S. P.

One, 41 mm., Tachon, known by its coloration, obtuse muzzle, large scales and fin formula. It somewhat resembles V. piapensis Herre from the Philippines, but with greatly larger mouth and different coloration.

that in the latter the head
is longer and the eye larger. In
its mode of coloration this
species has some resemblance
with Cryptocentrus octofasciatus
Late Regan.

920

Gobius clarki (Evermann and Shaw)

Ctenogobius clarki Evermann and Shaw
Proc. Cal. Acad. Sci., ser. 4, vol. 16, no.
4, p. 119, ^{Jan. 31,} 1927 (type locality, Chuchiz,
Hangchow; Shanghai).

Rhinogobius clarki Chu, Biol. Bull.
St. John's Univ., no. 1, p. 162, Jan. 1931
(reference).

Gobius clarki (Evermann and Shaw).

~~Stenogobius clarki Evermann and Shaw,
(California Acad. Sci. Proc.) ser. 4,
vol. 16, no. 4, p. 119, Jan. 31, 1927 (type
locality, Chuchi; Hangchow; Shanghai).~~

Depth $6 \frac{1}{5}$; head $3 \frac{3}{5}$. slender body
oblong, heaviest anteriorly, tapering
to caudal; head $3 \frac{3}{5}$. Eye $5 \frac{1}{2}$ in
head, a little greater than interorbital
width; mouth rather large; teeth
strong, flattened laterally.

Scales 50 in lateral line.

D. VII, 16, origin of second dorsal
little in advance of anal; A. 13 or
14; caudal long and rounded.

Length 80 to 170 mm. (Evermann
and Shaw.)

China.

Gobius cliffordpopei nichols

921

Gobius cliffordpopei nichols, Amer.
Mus. Novit. New York, No. 185, p. 5,
^{Sept. 25,} 1925 (type locality, Tungting Lake, Hunan);
Bull. Amer. Mus. Nat. Hist. New
York, vol. 58, art. 1, p. , 1928

— Chu, Biol. Bull. St. John's Univ.,
No. 7, p. 160, Jan. 1931 (reference).

Gobius cliffordpopei nichols

924a

Gobius cliffordpopei nichols, Pinner.

Proc. Zool. Soc. Lond., no. 185, p. 5, Sep. 25, 1925

(type locality, Tungting Lake, H. Kwan).

Depth $4 \frac{7}{10}$; head $3 \frac{2}{5}$. Snout $3 \frac{1}{2}$ in head; eye 5, superolateral, close together; maxillary reaches to under front of eye, length 2 in head; mouth somewhat oblique, jaws equal or lower, slightly projecting; lips thick, ^{no canine teeth} interorbital 4 in eye I. Gill membranes joined to sides of breast under or behind preopercle edge.

Scales 28 in lateral series. Predorsal naked.

D. VI or VII - 9, longest spine $1 \frac{7}{10}$ in head, longest dorsal ray $1 \frac{4}{5}$; A. 8, longest ray 2; caudal $1 \frac{1}{2}$, bluntly pointed; pectoral $1 \frac{1}{3}$, reaching beyond ventrals, but not to front of anal; ventral 2.

Broad black cross-bands posteriorly, somewhat variable in width.

Length 34 mm. to caudal base. ^{921b}
(Nichols.)

China. Said to differ from
Gobius hadropterus (Jordan and Snyder)
in the slightly projecting lower jaw,
and broad conspicuous vertical
bands on the sides.

Gobius cometes Alcock

Gobius cometes Alcock, Ann. Mag.
Nat. Hist., ser. 6, vol. 6, p. 208, pl. 8,
fig. 2, 1890 (type locality, Off Madras
Coast, h. lat. $18^{\circ}30'$, E. Long. $84^{\circ}46'$,
in 98 to 102 fathoms); Illustrat.
Zool. Investigator, pt. 5, pl. 20, fig.
3, 1898 (type); Cat. Indian
Deep Sea Fish., p. 71, 1899 (types).

Muraena kidako Schlegel, Fauna Japonica, Poiss., pts. 10 to 14, 1846,
p. 266, pl. 117 (type locality, Bay of Nagasaki).

Lycodontis kidako Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 56
(Honolulu; type of *Gymnothorax steindachneri*).

Lycodontis flavomarginata (not Rüppell) Günther, Rep. Voy. Challenger
vol. 1, pt. 6, 1880, p. 61 (Honolulu).

Gymnothorax steindachneri Jordan and Evermann, Bull. U. S. Fish Comm.
vol. 22, 1902 (1903), p. 166 (type locality, Honolulu).--Jenkins, op. cit., p.
426 (Honolulu).--Snyder, op. cit., vol. 22, 1902 (1904), p. p. 518 (Honolulu).
--Jordan and Snyder, Proc. U. S. Nat. Mus., vol. 27, 1904, p. 942 (Honolulu).
--Jordan and Evermann, Bull. U. S. Fish Comm., vol. 23, pt. 1, 1903 (1905), p.
101, fig. 28 (Honolulu).

Muraena steindachneri Günther, Journ. Mus. Godeffroy, vol. 9, pt. 17
1910, p. 417 (Hawaiian Is.).

Depth $4\frac{1}{2}$ (figure shows 4); head $2\frac{2}{3}$ (figure $2\frac{3}{4}$). Snout $5\frac{3}{4}$ in head from snout tip; eye $3\frac{2}{3}$ (figure $3\frac{1}{3}$), greater than snout, separated by very narrow shallow groove; maxillary reaches $\frac{1}{2}$ in eye (figure $\frac{1}{3}$, length $2\frac{3}{4}$ in head; mouth cleft well oblique, lower jaw slightly protrudes (figure shows it begins level with lower pupil edge); in each jaw an inner band of villiform teeth, and an outer regular row of slightly enlarged, acute, slightly curved teeth; tongue large, fleshy; subopercle much larger than opercle. Gill rakers small, weak.

Scales ^{ctenoid,} 23 or 24 in lateral series; 5 or 6 transversely; extend forward far as eyes on predorsal (on figure only far as preopercle), and head otherwise naked.

D. VI-I, 9, first spine $1\frac{5}{6}$ in total head length, first branched ray 2, eighth branched ray $1\frac{1}{8}$;

A. I, 9, first branched ray $2\frac{3}{5}$, eighth ^{2nd} branched ray $1\frac{1}{2}$; caudal 2 in rest of fish, long, pointed, supra-median rays longest; least depth of caudal peduncle 3 in total head length; pectoral $1\frac{1}{5}$, rays 23; ventral rays I, 5, fin $1\frac{2}{5}$ in total head length. Anal papilla long, slender (not shown on figure).

Color in life transparent gray, with 7 broad bright yellow cross bands not quite reaching middle of abdomen. Gills showing through gill cover as bright pink ~~spot~~ blotch. Second dorsal and caudal fins pencilled black and white like a feather. Anal with broad dark border. Ventrals blue. Yellow cross bands fade in spirit.

Length 101 to 127 mm. (Alcock.)

Off Ganjam, India, to 107 fathoms.

U. S. N. M., no. 44427. Bay of
Bengal. Investigator Collection.
Length 90 to 115 mm. Five examples.

924

Gobius cryptosquamis Rendahl

Gobius cryptosquamis Rendahl,
Arkiv för Zool. Stockholm, vol. 16,
no. 2, p. 24, 1924 (type locality,
Fengtien, Hulutao). — Chu, Biol.
Bull. St. John's Univ., no. 1, p. 160,
Jan. 1931 (reference).

925

Gobius culionensis (Herre)

Ctenogobius culionensis Herre, Fish.
Herre Philippine Exped. 1931, p. 84.
(1934) (type locality, Culion). —
Roxas and Martin, Departm. Agric.
Comm. Manila, Techn. Bull. 6, p.
226, 1937 (reference).

Gobius cyanomox Bleeker

Gobius cyanomox Bleeker, Verh.
Batavia Genoot. (Blenn. Gob.),
vol. 22, p. 25, 1849 (type locality,
"In Fretto Maduerae prope Soerabaya and Kammal";
(Madura) vol. 22, p. 5, 1849 (Madura); (Nid. Oost-Java), vol.
23, p. 9, 1850; Nat. Tijds. Ned. Indië, vol. 18, p. 369, 1859 (Bengk.);
— Károli, Termész. Füzetek, Budapest, vol. 1,
p. 164, 1881 (1882) (Serangoon; Palaboen).
— Rutter, Proc. Acad. Nat. Sci. Phila-
delphia, p. 85, 1897 (Swatow).
Verlag. Kon. Akad. Wet. Amsterdam, vol. 12, p. 56,
1861 (Singapore). — Günther, Cat. Fish. Brit.
Mus., vol. 3, p. 39, 1861 (copied).

Rhinogobius cyanomox Fowler, Proc. Acad.
Nat. Sci. Philadelphia, vol. 79, p. 290, 1927
(Orani; Orion) (error).

Rhinogobius cyanomox Chu, Biol. Bull.
St. John's Univ., no. 1, p. 162, Jan. 1931
(reference). — Roxas and Harten,
Departm. Agric. Comm. Manila, Techn. Bull.
6, p. 227, 1937 (reference).

Acentrogobius cyanomox Koumans, Zool.
Meded., vol. 19, Leiden, p. 178, 1937
(types of Gobius cyanoclavus; Gashin R.,
Siam).

Gobius cyanoclavus Cantor

927

- Gobius cyanoclavus Cantor, Journ.
Asiatic Soc. Bengal, vol. 18, pt. 2,
p. 1167, 1849 (1850) (type locality,
Pinang). — Günther, Cat. Fish.
Brit. Mus., vol. 3, p. 40, 1861 (types).
— Károli, Termész. Füzetek, Budapest,
vol. 5, p. 165, 1881⁽¹⁸⁸²⁾ (Singapore). —
Fowler, ~~Cat~~^{List} Fish. Malaya, p. 217, 1937
(reference).
— Martens, Preuss. Exped. Ost Asien, vol. 1,
p. 391, 1876 (Manila).

928

Gobius spilopterus H. M. Smith

Acentrogobius spilopterus H. M. Smith,
Journ. Siam Soc. Nat. Hist., ^{Suppl.} vol. 8,
no. 4, p. 259 ^{pl. 23} June 30, 1932 (type
locality, Tachin River, Siam). —
Suvatti, Index Fish. Siam, p. 155,
1936 (reference).

Depth 6 in total length; head $4\frac{1}{2}$, obtuse convex, width $1\frac{2}{3}$. Eye 5 in head, advanced in head, less than eye diameter distant from one another; mouth cleft curved, reaches below front of eyes; teeth fine, upper outer series enlarged and conic, lower jaw with 2 lateral curved canines.

Scales 30 in lateral series.

Scales on occiput small.

D. VI- I, 11, first dorsal lower than body depth and males with second and third spines produced in filaments; second dorsal and anal pointed; A. I, 10; caudal obtusely rounded, length 5 in body; pectoral $6\frac{3}{4}$, rays \pm , 17; ventral rays I, 5, length $5\frac{3}{4}$ in body. Anal papilla conic, elongate.

Color of male with body green, sides with 4 or 5 longitudinal series of bright yellowish-green spots. Bright blue humeral blotch. First dorsal fin clear hyaline, base brownish. Second dorsal blackish, with white spots and red margin. Caudal

greenish yellow, with brown basal spot above, upper end golden, lower end brown. Anal and ventral violaceous. Pectoral green.

Female with dorsal and pectoral fins green, caudal and anal with lower edges white, and ventrals whitish.

Length 108 mm.

(Bleeker.)

East Indies.

Gobius cylindriceps (Hora)

Ctenogobius cylindriceps Hora, Mem.

^{Indian Mus.} Asiatic Soc. Bengal, vol. 5, p. 494, ^{text - 28,} fig. 26, ^{localities} Chulka Lake; ~~Lake Vap, Siam~~.
 April 1924³ (Type locality, ~~Lake Vap, Siam~~).

— Suwatti, Index Fish. Siam, p. 153,

1936 (reference).

930

Gobius davaoensis (Seale)

Gnatholepis davaoensis Seale,
Philippine Journ. Sci., vol. A, 4,
p. 537, 1909 (type locality, Samal,
Davao Province, Mindanao). —
Herre, Gobies of Philippines, p. 134,
1924 (copied); Journ. Pan-Pac.
Res. Inst., vol. 8, no. 4, p. 10, 1933
(Dumaguete); Fish. Herre Philippine
Exped. 1931, p. 82 (1934) (Negros;
Samal; Sitanikai). — Roxas
and Martin, Departm. Agric. Comm.
Manila, Tech. Bull. 6, p. 232, 1937
(reference).

(731)

Depth $4 \frac{1}{5}$; head $3 \frac{3}{4}$. Snout $3 \frac{3}{4}$
in head; eye $3 \frac{3}{4}$, very close together,
maxillary reaches below front eye
edge; mouth cleft oblique, jaws
equal; teeth in several rows in each
jaw, in outer row enlarged and curved,
with large, recurved, posterior canine
on each side in lower jaw; tongue
strongly notched; interorbital space
a mere ridge.

Scales about 26 in lateral series.
Whole fish covered with large thin
scales, in 3 rows on preopercle.
D. VI, I, 11, longest spine of
first dorsal $1 \frac{1}{3}$ in head and equals
longest ray of second dorsal; A.
I, 10, little higher than second
dorsal, longest ray equals head;
caudal rounded, $\frac{1}{4}$ times longer
than head; pectoral equals head;
ventral very long, equals caudal,
tips reach anal.

932

dull yellowish gray, with 6
dusky blotches - along side, 3 or 4
distinct black dots at caudal
base, black band from eye to
middle of throat, some scattered
black specks over body, and
indistinct, dusky, dorsal cross-
bars. First dorsal grayish with
several scattered dusky spots and
10 black dots on lower part of
fin. Second dorsal grayish, front
part with faint, darker cross-
bars. Anal peculiarly checkered
with round black and white
spots. Caudal grayish, with
numerous indistinct brownish
dots and several larger distinct
black spots on lower half of fin.
Pectoral gray. Ventral gray, with
black margin.

Length 45 mm.

(Seale.)

Philippines, Mindanao.

Gobius delagoae Barnard

Gobius delagoae Barnard, Ann. South
African Mus., vol. 32, pt. 2, p. 62, fig. 3
(head), March 1937 (type locality,
Duyack Island, Delagoa Bay).

Depth $6\frac{2}{3}$; head $4\frac{1}{2}$. Snout $5\frac{4}{5}$ in head from snout tip; eye $3\frac{1}{2}$, greater than snout, greatly exceeds interorbital; maxillary reaches below front eye edge, length $3\frac{1}{3}$ in head from snout tip; teeth in narrow bands in both jaws, outer ones somewhat enlarged and single enlarged curved canine on each side of lower jaw; tongue truncate in front, mouth cleft inclined, begins in front level with lower edge of pupil; interorbital very narrow, 4 in vertical eye diameter. Gill rakers reduced. No flaps on shoulder girdle. Scales 5.5 in lateral series; 16 transversely. Scales cycloid, those on hinder part of body feebly stenoid. Two irregular horizontal rows of papillae below eye on cheeks; 2 close set parallel

rows along preopercle edge, with ^{933b}
lower extended forward along lower
side of mandible; postocular line
back to suprascapula; vertical line
anteriorly on opercle, and shorter
median horizontal line.

D. VI - I, 13, first spine 2 in
head, fifth twice long as first
and extended in filament; A.
I, 13; caudal lanceolate, half as
long again as head, middle rays
filamentous; pectoral rays 19,
upper not silk like; ventral reach
to vent, almost to anal.

Pale brown with darker mottling,
somewhat vermiculate on head, blotchy
on body. Body with oblique dark
bands running from above down-
wards and forwards; first band
broad, behind pectoral, followed
by 2 narrow bands, then a broad
one ending below at vent, then one
narrow, one broad, one narrow,
last between middle of soft dorsal

933c

and middle of anal; narrow
bands composed of 2 dark stripes
with pale interval; broad ones of
3 dark stripes. Two dark stripes
between eye and upper jaw. Dorsal
with a few small black spots.
Anal dark gray, middle rays of
ventral and caudal blackish.

Length 75 mm. (Barnard.)

Delagoa Bay, Portuguese
East Africa.

Gobius dentifer (Hora)

934

Ctenogobius dentifer Hora, Mem.
Indian Mus., vol. 5, p. 747, text-fig.
29, April 1923 (type locality, Rambha
Bay, Chilka Lake; near Satpara and
Barnibuda).

Gobius devisi (Mc Culloch
and Ogilby)

Mugilogobius devisi Mc Culloch
and Ogilby, Records Austral. Mus.,
vol. 12, pt. 10, p. 223, July 14, 1919
(on de Vis). — Mc Culloch, Austral.
Mus. Mem., no. 5, pt. 3, p. 376, Nov.
28, 1929 (reference). — Whitley, Australian
zoologist, vol. 6, pt. 2, p. 123, Jan. 14, 1930 (reference).
— Mc Culloch and Whitley, Mem. Queensland Mus.,
vol. 8, pt. 2, p. 172, July 17, 1925 (reference).

Gobius stigmaticus (not Smaragdus
stigmaticus Poey) de Vis, Proc. Linn.
Soc. New South Wales, vol. 9, pt. 3,
p. 686, Nov. 29, 1884 (Moreton Bay,
Queensland).

Gobius dewaali Weber

Gobius dewaali Weber, Zool. Jahrb.
Syst., vol. 10, p. 145, 1899 (type
locality, Umgeni River; ^{Natal} Illovo River). — Boul-
enger, Cat. Fresh Water Fish. Africa,
vol. 4, p. 26, 1916 (copied).
— Gilchrist and Thompson,
Ann. Durban Mus., vol. 1, pt. 4, p.
402, 1917 (reference). — Barnard,
Ann. South African Mus., vol. 21,
p. 815, Oct. 1927 (Umgeni and
Illovo Rivers; Durban).

Gobius dewaali Gilchrist, Marine
Investig. South Africa, vol. 1, p. 131,
1902 (reference).

Depth $4\frac{1}{4}$; head $3\frac{1}{2}$. Snout shorter than eye; eye 4 in head; mouth subinferior, extending to beyond vertical of posterior border of eye; teeth biserial, with curved canine on each side of lower jaw; interorbital region very narrow.

Scales 26 in lateral line series; 10 transversely. Head naked, except on gill cover.

D. VII, I, 9; A. I, 9; caudal rounded. Ventral reaching vent.

Color yellowish brown, with large dark brown spots, forming a zigzag band on each side. Dorsal and anal with irregular dark spots. Deep black spot on hinder third of first dorsal.

Length 40 mm.
Hattal.

(Boulenger.)

937

Gobius dispar Peters

Gobius dispar Peters, Monatsber. Akad. Wiss. Berlin, p. 263, 1868 (Type locality, Lakes Bubi and Bato, Camarines Sur Province, Luzon; Libmanan River).

Vaimosa dispar Herre, Gobies of Philippines, p. 142, 1927 (Lakes Bubi and Bato); Fish. Herre Philippine Exped. 1931, p. 82 (1934).

Mugilogobius dispar Roxas and Martin, Departm. Agric. Comm. Manila, Techn. Bull. 6, p. 234, 1937 (reference).

938

Depth 3 to $3\frac{1}{2}$ in males, $3\frac{3}{5}$ to $4\frac{1}{2}$ in females; head $2\frac{4}{5}$ to $3\frac{1}{5}$ in males, $3\frac{1}{10}$ to $3\frac{1}{3}$ in females. Snout $3\frac{1}{4}$ to $4\frac{1}{10}$ in head in males, $4\frac{1}{5}$ to 5 in head in females; eye 4 to $4\frac{4}{5}$, greater than interorbital; maxillary reaches opposite hind eye edge or often much farther; in females mouth much smaller or maxillary usually reaches just back of front eye edge, rarely to middle of eye; mouth oblique, terminal, jaws equal; outer teeth of upper jaw slender, curved, enlarged, in short row, followed by 3 rows of minute teeth; lower jaw with 4 rows of very small slender teeth at forward end, reduced in number laterally, inner row much enlarged & posteriorly, others disappearing; interorbital $\frac{1}{2}$ to $\frac{4}{5}$ of

eye diameter.

939

Scales 28 to 30 in lateral series; 8 transversely, 10 predorsal. Body covered with large ctenoid scales, slightly smaller and cycloid above opercles, extend forward on predorsal to eyes, anterior scales in midline behind eyes enlarged. Opercles covered with large cycloid scales and preopercles naked. Pectoral bases and breast scaled.

D. VI—I, 7, fins well separated, first dorsal height 2 to $2\frac{1}{2}$ in head, in males second dorsal with fifth and sixth rays $1\frac{1}{2}$ to $1\frac{4}{5}$; A. I, 7, fifth and sixth rays $1\frac{4}{5}$ to 2; in females dorsal and anal usually equal, $1\frac{4}{5}$ in head; depth of caudal peduncle $1\frac{4}{5}$ to $1\frac{9}{10}$ its own length in males, $2\frac{1}{10}$ to $2\frac{1}{5}$ in females; caudal $1\frac{1}{10}$ to $1\frac{1}{3}$ in head; pectoral $1\frac{1}{5}$ to $1\frac{2}{5}$, then,

pointed, scarcely reaching above⁹⁴⁰
anus; ventral thin, broad,
equals anal in length, never
reaching anus.

In Alcohol varies from dark
brown or blackish to pale
yellowish, with black or dark
brown spot on shoulder,
followed by row of 8 or 10 closely
spaced, more or less poorly
defined dark spots which continue
back to caudal base. In males
sides and underpart of head
strewn with white spots or small
irregular lines and bars. In
females they show indistinctly or
are absent. Top of snout and
interorbital dark brown. Small
circular dark spot on posterior
part of upper margin of eye. Fins brownish
or dusky. First dorsal with broad clear
band across middle and upper margin also
clear. Second dorsal and anal with 3 clear crossbars.
(Herre.)
Length 17 to 45 mm.
Philippines.

941

Remarks. This interesting and handsome little goby enters the group typified by Vaimosa Jordan and Seale. It differs from all the species associated in Vaimosa by Herre, not only in contour and coloration, but also in the large scales which do not exceed 22 or 23 in a lateral count. The extended first dorsal of my species greatly exceeds the length of the head and reaches well into the middle of the second dorsal fin. Its large eye greatly exceeds the snout or the narrow infraorbital. Quite characteristic in the variegated color pattern is the pair of dark or black spots at the caudal base, one above the other. In appearance it would seem to approach closest to Gobius dispar Peters.

One-hundred examples. Lake
Taal, Luzon, in depth of fifty
feet. January 18, 1908. Length
10 to 21 mm.

~~Thirty-two~~ ^{thirty-two} ~~five~~ examples. Nanjan
River, Mindoro. June 5, 1908.
Length 13 to 30 mm.

One example. Reef opposite Cebu.
April 5, 1908. Length 17 mm.

Three examples. Iato River, Luzon.
June 17, 1909. Length 25 to 30 mm.

One example. Cascade River,
Murcielagos Bay, Mindanao. August
20, 1909. Length 38 mm.

Three examples. Nanjan River, Mindoro.
June 5, 1908. Length 25 to 30 mm.

Twenty-seven examples. Pangasinan
River, Port Calton, Busuanga Island.
December 16, 1908. Length 15 to 32 mm.

One example. Zamboanga Canal,
Zamboanga. October 8, 1909.
Length 37 mm.

U. S. N. M., no.

homocan

River, Camp Overton, Mindanao.
August 6, 1909. Length 71 mm.
Type.

U. S. N. M., no.

Same

data as preceding. Length 67 mm.
Paratype.

U. S. N. M., no.

hato

* River, Luzon. June 17, 1909. Length
38 mm. Two examples.

Ten examples. Pangasinan River,
Port Calton, Busuanga River.
December 16, 1908. Length 21 to 41 mm.

244

Gobius durbanensis Barnard

Gobius durbanensis Barnard,
Ann. South African Mus., vol. 21,
pt. 2, p. 815, Oct. 1927 (type
locality, Durban Bay).

Mugilogobius durbanensis Fowler,
Proc. Acad. Nat. Sci. Philadelphia,
vol. 86, p. 495, Nov. 6, 1934 (False Bay,
North Zealand).

depth 5 to $5\frac{1}{4}$; head $3\frac{2}{5}$ to $3\frac{2}{3}$, width $1\frac{1}{3}$. Snout $3\frac{1}{2}$ to $4\frac{2}{5}$ in head; eye $3\frac{1}{4}$ to $4\frac{1}{5}$, much greater than snout, equals interorbital; maxillary reaches $\frac{1}{4}$ in eye, length $2\frac{1}{2}$ to $2\frac{2}{3}$ in head; mouth width $2\frac{1}{2}$ to 3; teeth minute, in narrow bands in jaws; tongue truncate; interorbital level. Gill opening exposes wide isthmus, without fold across.

Scales 33 to 35 in axial lateral series from above gill opening to caudal base and 3 or 4 more on latter; 11 transversely at soft dorsal and anal; 17 or 18 predorsal scales forward opposite middle of eyes; muzzle naked; opercles and postocular

region scaled; breast and belly completely scaly. Several longitudinal rows of papillae on cheek. Scales with 11 or 12 basal parallel striae; 15 to 17 apical denticles; circuli coarse.

D. VI - I, 7, I, third spine 2 to $2\frac{1}{5}$ in head, last ray $1\frac{2}{3}$ to 2; A. I, 6, I, or I, 7, I, last ray 2; least depth of caudal peduncle $1\frac{4}{5}$ in its length or 2 in head; caudal $1\frac{1}{8}$ to $1\frac{1}{4}$, rounded or convex behind; pectoral $1\frac{1}{5}$ to $1\frac{2}{5}$, upper rays not silky; ventral $1\frac{3}{5}$ to $1\frac{3}{4}$.

Pale brown - generally, back with rather coarse deeper reticulations leaving 2 or 3 longitudinal rows of pale round spots. Muzzle grayish. Dusky blotch on opercle. Two dark

947

spots at caudal base. Dorsals,
anal and caudal with grayish.
Paired fins pale. Iris gray.
Hatal, Zululand.

A. N. S. P., two examples. False
Bay, North Zululand. 1931. H. W.
Bell Marley. Length 26 to 40 mm.

948

Gobius aegyptius Chabanaud

Gobius lesneuri aegyptius Chabanaud,
Bull. Inst. Océanogr. Monaco, no. 627,
p. 627, fig. 7 (scale), July 25, 1933
(type locality, Lake Timsah,
Isthmus of Suez).

? Gobius elegans Valenciennes

949

- Gobius elegans (Kuhl and Van Hasselt)
Valenciennes, Hist. Nat. Poiss., vol.
12, p. (58) 44, 1837 (type locality,
Java; ^(not Valenciennes) Vanicolo; New Guinea;
Bombay). — Cantor, Journ. Asiatic
Soc. Bengal, vol. 18, pt. 2, p. 116, 1849 (reference).
— Bleeker, Verh. Batavia Genoot. (Ned. Ichth. Bengal), vol. 25, p. 50, 1853 (reference).
1849 (1850) (Penang). — Günther,
Cat. Fish. Brit. Mus., vol. 3, p. 18,
1861 (Cantor's material). —
Károli, Termesz. Füzetek, Budapest,
vol. 5, p. 164, 1881⁽¹⁸⁸²⁾ (Changi River).
— Whitley, Journ. Pan-Pac. Res.
Inst., vol. 3, no. 1, p. 13, Jan.-March
1928 (Santa Cruz Islands). —
Fowler, Mem. Bishop Mus., vol. 10,
p. 404, 1928 (copied); vol. 11, no. 5,
p. 361, 1931 (reference); ^{Litt. Fish.} ~~Cat.~~ Malaya
~~Fish.~~, p. 217, 1937 (reference).
— Jouran, Mém. Soc. Nat. Cherbourg, ser. 2, vol. 2,
p. 125, 1866 (N. 8° 40' lat., E. 104° 15' long, Proul-
Condor Is., off Lower Cochín).

Gobius elegans

— Bleeker, Verh. Batavia. Genoot.
(Blenn. Gob.), vol. 22, p. 3, 1849
(name only); (Nalez. Bengal. Hind.),
vol. 25, p. 50, 1850 (name only).
Nat. Tijds. Ned. Indie, vol. 1, fig. 10,
1851.

— Day, Fishes of India, pt. 2, p. 293,
1876; Fauna British India, Fishes,
vol. 2, p. 264, 1889

Gobius electrioides Bleeker

957

Gobius electrioides Bleeker, Verh.
Batavia. Genoot. (Blenn. Gob.),
vol. 22, p. 25, 1849 (type locality,
Batavia, in sea); Nat. Tijds. Ned.
Indie, vol. 5, p. 154, 1853 (Macassar);
vol. 9, p. 283, 1855 (Macassar); Act.
Soc. Sci. Ind. Neerl., vol. 3, no. 9,
p. 2, 1857-58 (Padang, Sumatra),
p. 5 (Priaman), ^(Arch. Sumatra) vol. 8, p. 41, Feb.-Aug. 1859 (Bencoolen; Priaman; Padang);
Verlag. Kon. Akad.
Wet. Amsterdam, vol. 12, p. 32, 1861
(Singapore); ~~Nat. Malay~~
(Nert. Celebes), vol. 8, p. 43, 1860 (Celebes);

— Fowler, ^{List} Cat. (Malay. Fishes), p. 217,
1937 (reference).

95/a

Depth 6 in length; head 4, acute, depressed, width 2. Snout blunt; eye $4\frac{1}{2}$ in head, at second fourth in head length, close to opposite eye; mouth oblique, reaches below eye; teeth fine, in several series, outer row enlarged, and lower jaw with several canines.

Scales 28 in lateral series; small on predorsal.

D. VI - I, 10, first fin lower than body, second obtuse; A. I, 9, acute; caudal obtuse, rounded, length $5\frac{1}{2}$ in body; pectoral rays 18. ventral rays I, 5; paired fins $5\frac{1}{2}$ to 6 in body. No anal papilla.

Color brown. First dorsal, anal and ventral black.

Length 78 mm.

Jawa.

(Bleeker.)

^{Gobius}
~~Oxyurichthys~~ eremius Ziety

952

Sci.

(Gobius eremius Ziety, Rep. Horn Exped.,
Central Australia,
vol. 2, ^{pool,} 180, pl. 16, fig. 5, 1896 (type
locality, Coward Spring, in a small pool of water
around an artesian well).

— McCulloch, Rec. Austral. Mus.,

vol. 11, no. 7, p. 183, pl. 31, fig. 1, 1917
(Strangways Springs, Lake Eyre Basin, South Australia).

— McCulloch and Ogilby, Rec. Austral.

Mus., vol. 12, no. 10, p. 257, July 14,
1919 (reference). — McCulloch, Austral.

Mus. Mem., no. 5, pt. 3, p. 372, Nov. 28,
1929 (reference).

953

Depth $4 \frac{4}{10}$; head $3 \frac{1}{3}$. Snout $3 \frac{3}{4}$ in head; eye $4 \frac{1}{3}$, $1 \frac{1}{8}$ in snout; maxillary extends $\frac{1}{2}$ in eye, length 3 in head; mouth low, but little inclined from horizontal, jaws equal; each jaw with 3 rows of small, simple teeth, fixed and subequal, palate smooth; tongue rounded. ^{interorbital greater than eye,} in front; top of head flat, ^{eye} impinging on upper profile of head. Gill opening wide, with broad interspace between. Shoulder girdle without cutaneous flaps.

Scales 36 to 46 from behind middle of pectoral to caudal fin; 13 transversely between soft dorsal and anal. Head naked, without raised glandular ridges or barbels. Predorsal scales extend laterally forward above opercles, leaving naked median space to first dorsal

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spine. Breast, chest, prepectoral and postaxillary region of pectoral naked. Scales mostly cycloid, finely ctenoid behind pectorals, smallest anteriorly and largest on caudal peduncle.

D. VI 9 or 10, fourth spine $2\frac{1}{2}$ in head, third ray 2; A. 8 or 9, seventh ray $2\frac{1}{8}$; caudal $1\frac{1}{5}$ convex behind; least depth of caudal peduncle $2\frac{1}{4}$; pectoral rays 13, fin $1\frac{1}{3}$ in head; ventral $2\frac{1}{8}$, rays I, 5. Anal papilla half of eye.

Light brown, with 6 darker cross bars on back, which white with others on sides, leaving whitish interspaces between. Head mottled with brown. Dark bar on cheek from below eye. First dorsal dark brown, blackish posteriorly, with broad white intramarginal

band. Second dorsal brown, ⁹⁵⁵
with darker mottling, margin
white. Anal brown, margin
white. Caudal with irregular
rows of dark spots. Pectorals
more or less brown, with
lighter basal bar.

Length 25 to 58 mm. (McCulloch.)

South Australia.

956

Gobius erythrops (Jordan and Seale)

Chaenogobius erythrops Jordan and Seale, Bull. Bur. Fisher., vol. 25, p. 404, pl. 37, fig. 3, 1905 (1906) (type locality, Pago Pago, Samoa).
Fowler, Mem. Bishop Mus., vol. 10, p. 414, 1928 (type).

Depth $5\frac{1}{2}$; head 3. Snout $3\frac{3}{4}$ in head from snout tip; eye 3, greater than snout, little premedian in head length, and impinging slightly on upper profile of head; maxillary reaches $\frac{1}{4}$ in eye, length $2\frac{1}{2}$ in head from snout tip; teeth mouth begins nearly level with lower edge of pupil, lower jaw protruded in front; teeth in jaws uniserial, anteriorly little larger, also few on vomer but none on palatines;

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front end of tongue with median notch.

Scales 41 in lateral series.

D. VI - 9, third spine $2\frac{1}{6}$ in total head length, second ray $2\frac{1}{5}$; A. 7, second ray $2\frac{7}{8}$; caudal $1\frac{4}{5}$; least depth of caudal peduncle 4; pectoral $1\frac{3}{4}$, rays 14; ventral I, 5, length $1\frac{9}{10}$ in total head length. Anal papilla $1\frac{3}{4}$ in eye.

Whitish, with scattered gray to dark gray dots over body. Fins largely uniform. Samoa.

U. S. N. M., no. 51781. Pago Pago, Samoa. Bureau of Fisheries. Length 14 mm. Type.

Gobiomorphus eugenius (Jordan and Evermann)

Quisquilius eugenius JORDAN and EVERMANN, Bull. U.S. Fish Comm., vol. 22, p. 203, 1902 (1903) (type locality, Waikiki; Honolulu; Oahu).-- SNYDER, op. cit., vol. 22, p. 536, 1902 (1904) (Laysan Island). - JORDAN and EVERMANN, op. cit., vol. 23, pt. 1, pl. 57, 1903 (1905). - JORDAN and SNYDER, Bull. Bur. Fisher., vol. 26, p. 217, 1906 (1907) (Honolulu). - JORDAN and JORDAN, Mem. Carnegie Mus., vol. 10, No. 1, p. 77, Dec. 1922 (Hawaii).

Gobiomorphus eugenius JORDAN and EVERMANN, Bull. U.S. Fish Comm., vol. 23, pt. 1, p. 483, 1903 (1905) (Honolulu; Waikiki). - JORDAN and SEALE, Bull. Bur. Fisher., vol. 25, p. 384, 1905 (1906) (reference).-- FOWLER, Mem. Bishop Mus., vol. 10, p. 393, 1928 (compiled); vol. 11, No. 6, p. 441, 1934 (Suva; Santo).

Gobius eugenius Tomiyama, Jap.
Journ. Zool., vol. 7, No. 1, p. 61,
fig. 14, Oct. 25, 1936 (Hatsizyo-
zima, Idu-siti-to).

Lycodontis undulata (Lacepede).

Muraenophis undulatus Lacepede, Hist. Nat. Poiss., vol. 5, 1803, pp. 629, 644, pl. 64, fig. 2 (type locality, not given) (on Commerson).

Muraena undulata Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 110 (Hawaiian Is.).--Streets, Bull. U. S. Nat. Mus., no. 7, 1877, p. 77 (Honolulu).--Günther, Journ. Mus. Godeffroy, vol. 9, pt. 17, 1910, p. 413, pls. 164 and 165 (Hawaiian Is.; Society Is.).

Gymnothorax undulatus Jenkins, Bull. U. S. Fish Comm., vol. 22, 1902 (1903), p. 4 (Honolulu).--Snyder, op. cit., vol. 22, 1902 (1904), p. 518 (off Molokai; Honolulu).--Jordan and Evermann, op. cit., vol. 23, pt. 1, 1903 (1905), p. 98, pl. 16 (Honolulu).--Seale, Occas. Pap. Bishop Mus., vol. 4, no. 1, 1906, p. 9 (Raiatea).--Fowler, Proc. Acad. Nat. Sci. Phila., 1912, p. 21 (Hawaiian Is.); Copeia, no. 112, Nov. 20, 1922, p. 82 (Hawaii).--Herre, Field Mus. Publ., no. 353, Zool. ser., vol. 21, April 15, 1936, p. 46 (South Seymour I., Galapagos).

Lycodontis undulata Fowler, Bull. Bishop Mus., no. 38, 1927, p. 6 (Fanning, Tongareva, Howland Is.); Mem. Bishop Mus., vol. 10, 1928, p. 56 (Honolulu; Tahiti; Nukuhiva; Raiatea; molokai; Fakarava; Society Is.; types of *Gymnothorax zonipectis*, *G. mucifer*, *G. gracilicauda*, *Muraena acutirostris* and *Thyrsoidea kaupi*); vol. 11, no. 5, 1931, p. 317 (Honolulu).

Amblygobius naraharae Snyder,
 Proc. U. S. Nat. Mus., vol. 35, p. 101,
 1909 (type locality, Naha, Okinawa);
 vol. 42, p. 515, pl. 68, fig. 2, 1912
 (Naha; type).

Trisquilus profundus Weber, Notes
 Leyden Mus., vol. 31, p. 155, 1909 (type
 locality, Sapeh Strait, Longala, Palor Bay).
Siboga Exped., vol. 57, Fische, p. 483,
 fig. 100, 1913 (types).

Genus Pleurogobius Seale

Pleurogobius Seale, Philippine Journ.
Sci., vol. 4, no. 6, p. 536, 1906. (Type
Pleurogobius boulengeri Seale,
monotypic. Without generic diagnosis.)

Cingulogobius Herre, Gobies of Philippines,
p. 201, 1927. (Type Pleurogobius
boulengeri Seale.)

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Pleurogobius bouengeri Seale

Pleurogobius bouengeri Seale, Philippine
Journ. Sci., vol. 4, no. 6, p. 536, 1906.
(type locality, Puerto Princesa,
Palawan).

Cingulogobius bouengeri Herre, Gobies
of Philippines, p. 20, ^{p. 16, fig. 1, 3} 1927 (type);
Fishes Herre 1931 Philippine Expedition,
p. 87, 1934 (Sitanki). — Roxas and
Martin, Depart. Agric. Comm. Manila,
Tech. Bull. 6, p. 236, 1937 (reference).

Depth $3 \frac{2}{3}$ to $3 \frac{4}{5}$; head $2 \frac{4}{5}$ to 3, width $1 \frac{1}{4}$ to $1 \frac{2}{5}$. Snout $4 \frac{1}{2}$ to $4 \frac{3}{4}$ in head from snout tip; eye 3 to $3 \frac{1}{5}$, greatly exceeds snout or interorbital; maxillary reaches opposite front eye edge, length 3 in head from snout tip; teeth above biserial, pointed, outer larger, similar below; tongue truncate in front; interorbital width 2 in eye, narrow, deeply furrowed. Gill opening extends forward until nearly below hind eye edge.

Scales 25 in lateral series; 12 transversely; 12 predorsal forward to eyes. Cheeks and opercles scaly. Postocular line of papillae back to suprascapula; horizontal row close along lower eye edge and another on lower part of cheek; line close along above maxillary; line along edge of preopercle and forward on each lower face of mandible; vertical line on front part of opercle and another short horizontal line below.

D. VI - I, 10, third spine $1 \frac{2}{3}$ in total head length, first branched ray $2 \frac{1}{5}$; A. I, 9, first branched ray $2 \frac{1}{3}$; least depth of caudal peduncle $2 \frac{2}{5}$; caudal $1 \frac{1}{3}$, convex behind; pectoral 1, rays 21; ventral rays I, 5, fin $1 \frac{1}{6}$ in total head length.

In alcohol brown, with 10 transverse darker bands, subequal in width with pale interspaces. Vertical fins dark gray. Paired fin gray.

Hawaiian Islands, Fiji.

(963) width $1\frac{1}{3}$ to $1\frac{1}{5}$.
Depth $3\frac{7}{8}$ to 4; head 3 to $3\frac{3}{5}$,
snout $3\frac{1}{3}$ to $4\frac{1}{2}$ in head from
snout tip; eye 3 to $3\frac{2}{5}$, greater
than snout, eyes very close set;
maxillary reaches $\frac{1}{8}$ in eye, length
 $2\frac{2}{5}$ to $2\frac{7}{8}$ in head from snout
tip; mouth oblique, begins in
front level with lower eye edge,
lower jaw slightly protruded;
teeth above in 3 rows, outer
row enlarged, lower teeth biserial
also outer row enlarged; inter-
orbital narrow, with eyes invading
upper profile of head.

Scales 25 to 27 to caudal
base and 2 or 3 more on latter;
9 or 10 transversely, 10 to 15 pre-
dorsal forward to eyes. Few
small scales on opercle above.

D. VI, I, 11, I, third spine 2 in
total head length, soft dorsal
height $1\frac{3}{4}$ to 2; A. I, 10, fin

(964)

height $1\frac{4}{5}$ to 2; caudal $1\frac{1}{8}$, convex behind; least depth of caudal peduncle $2\frac{1}{5}$ to $2\frac{3}{5}$; pectoral $2\frac{7}{8}$ to 3 in fish without caudal; ventral $1\frac{1}{8}$ to $1\frac{1}{2}$. Anal papilla conic, $\frac{1}{2}$ of eye.

Dark brown, with 12 narrow white transverse bands, entirely encircle body, and each with dark bordering line. Four bands on head, 3 on trunk and 5 on tail with last one on caudal base. Vertical fins dark gray brown, paired fins whitish.

East Indies, Philippines, Riu Kiu, Japan, Melanesia, Polynesia, Hawaii.

U. S. N. M., no. 55300. Pearl Harbor,
Oahu, Hawaiian Islands. April
23, 1902. (Length 24 mm.) Bureau
of Fisheries.

U. S. N. M., no. 74553. Tanegashima
Island and Kaga, Okinawa, Ryū
Kyū Islands, Japan. Albatross
Collection Expedition 1906. Length
22 and 40 mm. Two "cotypes"
[= paratypes] of Amblygobius
naraharae.

U. S. N. M., no. 78065. Honolulu,
Oahu. U. S. Fish Comm. August 16.
Length 33 mm.

U. S. N. M., no. ———. Honolulu
harbor, Oahu. Dr. J. H. Streets.
Length 48 mm. to end of broken
caudal. (With U. S. N. M., no. 15401.)
Cheeks and opercles with small scales.

One example. (Galera Bay, Mindoro
June 9, 1908. Length 35 mm.)

967

Gobius farcimen (Jordan and Evermann)

Gobiopterus farcimen Jordan and Evermann,
Bull. U. S. Fish Comm., vol. 22, p. 205, 1902
(1903) (type locality, Hilo, Hawaii);
op. cit., vol. 23, pt. 1, p. 482, pl. 59, 1903
(1905) (type). — Fowler, Occas. Pap.

Bishop Mus., vol. 10, no. 7, p. 389, 1923
(Honolulu); Mem. Bishop Mus., vol.
10, p. 399, 1928 (Honolulu).

Jordan and Seale, Bull. Bur. Fisher.,
vol. 25, p. 407, 1905 (1906) (reference).

Gobius farcimen Taniyama, Jap. Journ.
Zool., vol. 7, no. 1, p. 61, 1936 (Kominato;
Misaki).

Zonogobius boreus Snyder, Proc. U.
S. Nat. Mus., vol. 36, p. 605, 1909
(type locality, Misaki, Kanagawa);
vol. 42, p. 442, pl. 59, fig. 3, 1912.
(type).

Depth 5; head $3 \frac{1}{4}$, width $1 \frac{3}{5}$. Snout 4 in head measured from upper jaw tip; eye 3, greater than snout, 3 times interorbital; maxillary reaches opposite eye, length $2 \frac{1}{2}$ in head from snout tip; teeth fine, in narrow bands in jaws, outer row slightly enlarged, one each side of mandibel forward especially larger; tongue moderate, depressed, truncate, free in front; interorbital narrowly concave. Gill rakers $2+4$, minute points, less than short gill filaments, which barely $\frac{1}{3}$ of eye.

Scales 25--2 in median lateral series; 9 scales transversely at soft dorsal and anal origins; 8 predorsal scales forward to eyes. Scales large, firmly adherent, in even longitudinal rows, little smaller on caudal base, and apparently few or absent from head. Scales with 7 basal radiating striae; apical denticles $18+17$; circuli fine basally, laterally coarser.

D. VI--I, 10, second spine $1 \frac{7}{8}$ in total head length, first branched ray 2; A. 9, eighth ray $1 \frac{2}{5}$; caudal $1 \frac{1}{8}$, convexly rounded behind; least depth of caudal peduncle $2 \frac{1}{2}$; pectoral $1 \frac{1}{4}$; ventral $1 \frac{1}{5}$. Anal papilla well developed.

Pale brownish generally, under surface whitish. Sides with 6 narrow dusky lines, all along lower side variegated by as many dull obsolete blotches. Some obsolete or pale dusky streaks on head, as several broken blotches on cheek. Sides of head sprinkled with minute dusky dots. Dorsals,

anal and caudal pale with dusky blotches, as 4 transverse rows of more distinct blackish blotches on caudal. Pectoral pale. Ventral with median area dusky and darker basally, edge whitish all around.

U. S. N. M., no. 50654. Hilo,
Hawaii, July 17, 1901. U. S. Fish
Comm. Length 27 mm. Though
simply identified as "Drombus"
I believe this specimen to be the
type of Gobiopterus farcimen
Jordan and Evermann. It was
originally catalogued with the
above number and later reentered
as U. S. N. M., no. 78088, and
drawn by Mrs. E. C. Starks.
The original locality label is
in my own handwriting.

972

Gobius flavoventris (Herre)

Rhinogobius flavoventris Herre,
Philippine Journ. Sci., vol. 34, p.
276, 1927 (type locality, Lake
Taal), p. 297. — Roxas and
Marton, Departm. Agric. Comm.,
Manila, Tech. Bull. 6, p. 227, 1937
(reference).

Gobius frenatus Günther

973

Gobius frenatus Günther, Cat. Fish.
Brit. Mus., vol. 3, p. 39, 1861 (type
locality, Australia). — Schmeltz,
Cat. Mus. Godeffroy, no. 1, p. 9, 1864
(South Seas). — Kner, Reise Novara,
Zool., pt. 1, p. 174, 1865.

— Pöhl, Cat. Mus. Godeffroy, no. 10, p. 33,
1884 (South Seas).

— McCulloch and Ogilby, Rec. Austral.
Mus., vol. 12, no. 10, p. 230, 1919 (reference).
— McCulloch, Fish. New South Wales,
ed. 3, p. 84, 1934.

— Fowler, Mem. Bishop Mus., vol. 11, no. 5,
p. 361, 1931 (reference).

(Austral. Mus. Mem., no. 5, pt. 3, p. 370, no.
28, 1929 (reference)).

Arenigobius frenatus Whitley, Australian
Zoologist, vol. 6, pt. 2, p. 123, Jan. 14, 1930 (reference).

973a

Depth nearly 6; head $4\frac{1}{2}$, higher than broad. Snout obtuse, convex, much longer than eye; eye nearly 7 in head; maxillary extends to vertical of front edge of eye; mouth cleft oblique, jaws equal; teeth of outer series enlarged; canine tooth on each side of lower jaw; interorbital width less than eye diameter.

Scales 35 in lateral series; 10 transversely between second dorsal and anal. Head and nape naked.

D. VI-I, 10, fins equal in height and lower than body, second, third and fourth spines highest and end in very fine short filaments; A. I, 10; caudal rounded, length 5 in total; none of pectoral rays silk like; ventral reaches nearly to vent.

Color in spirits brown, with darker spots. Head with some indistinct darker dots. Blackish band, edged with lighter, from maxillary to lower part of pectoral

973b
root. Dorsal fins with a transparent
margin, anterior brownish, posterior
with oblique blackish lines. Upper
half of caudal with brown crescent-
shaped dots between rays. Anal
and paired fins blackish. Pectoral
with base of lighter color and
with 2 blackish spots, produced
by bands described.

Length 97 mm.

(Günther)

Australia.

U. S. N. M., no. 59973. Port Hacking,
New South Wales. January 5, 1903.
D. G. Stead. Length 78 to 85 mm.
Two examples.

Gobius fuscus Rüppell

Gobius fuscus Rüppell, Atlas Reise-
hördl. Afrika, Fische, p. 137, 1828
(type locality, Red Sea). — Weber,
Siboga Exped., vol. 57, Fische, p. 466,
1913 (Beo; Liung; Samara; Niso
Laut).

— Taniyama, Jap. Journ. Zool., vol. 7, no. 1,
p. 63, 1936 (Misaki, Kanagawa to
Kagoshima; Asima and Hatizyo, Idu-
siti-to; Okinawa; Taihoku, Formosa).

Maipo fuscus Jordan and Evermann,
 Bull. U. S. Fish Comm., vol. 23, pt. 1,
 p. 483, fig. 212, 1903 (1905) (Honolulu;
 Hilo; Moanalua; Waialua; Waikiki;
 Waianae; Kailua). — Jordan and
Seale, Bull. Bur. Fisher., vol. 25,
 p. 402, 1905 (1906) (Bailele; Ana; Pago
 Pago); — Kendall and Goldborough,
 Mem. Mus. Comp. Zool., vol. 26, p. 320,
 1911 (Makemo; Rangiroa; Vavau; Kusaie
 Arhno); — Fowler, Copeia, no. 112, p. 84,
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fig. 3, 1919 (Murray I.; ~~Darwin I.~~)
Types of Gobius darwinensis, G.
marginalis, G. nigripinnis; Cooktown
Port Curtis; Swains I.; Port Darwin)

Bathygobius fuscus Jordan and Jordan,
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Bishop Mus., no. 22, 1925, p. 17 (Guam).
p. 38 (Tahiti). — Fowler and Ball,
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(Nihoa; Hecker; Lisiansky; Johnston I.;
Wake I.); — Fowler and Bean, Proc.
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— Fowler, Bull. Bishop Mus., no. 38, p.
28, 1927 (Christmas I.; Tngareva;
Howland; Lisiansky; Hecker I.; Laysan);
Mem. Bishop Mus., vol. 10, p. 405, 1928
(Hawaiian Is.; Tahiti; Pearl Harbor;
Honolulu; Api; Mangareva; Rangiroa;
Makemo; Arhno; Hilo; Laie Stream;
Waikiki; Palmyra; Marcus I.;
Shortland; Rarotonga; Makatea;
Mukuhiva; Guam; Nihoa; Hecker;
Lisiansky; Johnston I.; Wake I.;
Mani; Kingmills; Eavan; Tanga;
Society I.; Elton I.). — Suway, ~~Index~~
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— Whitley, Australian Zoologist, vol. 4, pt. 4, p. 233, April
1926 (North-West Islet).

- Herre, Gobies of Philippines, p. 113, pl. 8, fig. 2, 1927 (Jacloban; Kolambugan; Caldera Bay; Siasi; Bongau; Sibutu; Sitaraki; ^{- Index Fish. Herre Philippine Exped. 1931, p. 82, 1934 (Philippine localities)} Balabac; Andaman). — Juwatte, Index Fish. Siam, p. 156, 1936 (Laem Sing). — Herre, Field Mus. Public., no. 353, Zool. ser. vol. 21, April 15, 1936 (Galapagos; Marquesas; Tuamotus; Fiji; New Hebrides; Solomon). — Roxas and Martin, Departm. Agric. Comm. Manila, Tech. Bull. 6, p. 233, 1937 (reference).
- McCulloch, Austral. Mus. Mem., no. 5, pt. 3, p. 374, Nov. 28, 1929 (reference). — Koumans, Zool. Meded. Rijks Mus. Nat. Hist. Leiden, p. 121, 1935 (discussion).

Lycodontis mindanoensis (Borodin).

Gymnothorax mindanoensis Borodin, Bull. Vanderbilt Marine Mus., vol. art. 2, 1930, p. 43, pl. 1, fig. 1 (type locality, Mindanao, Philippines); vol. 1, art. 3, 1932, p. 72 (Bora Bora, Society Is.).

Lycodontis mindanoensis Fowler, Mem. Bishop Mus., vol. 11, no. 6, 1933, p. 390 (reference).

Gobius punctillatus Rüppell, Atlas
Reise nördl. Afrika, Fische, p. 138,
1828 (type locality, Red Sea).

Gobius albopunctatus Valenciennes,
Hist. nat. Poiss., vol. 12, p. (43) 57,
1837 (type locality, "La mer des
Indes" Péron; Mauritius). —
Rüppell, neue Wirbelth., Fische, p. 138,
1838 (near Mohila). — Kner, Reise
Novara, Fische, vol. 2, p. 173, 1865 (Miobara;
~~Plumjinger, Verh. zool. bot. Ges. Wien~~, vol. 2, p. 443, 1871 (Red Sea).
Tahiti). — Günther, Journ. Mus. Parentela
Godeffroy, Martens, Preuss. Exped. Ost Asien, vol. 1, 1876, p. 391 (Flores).
A, 1877 (Fiji; Samoa; Society Is.;
Kingsmill). — Macleay, Proc. Linn. Soc.
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1878. (Port Darwin); vol. 5, pt. 4, p. 595,
1881 (Port Essington; Port Darwin). —
Sauvage, Bull. Soc. Philom. Paris,
ser. 7, vol. 5, p. 106, 1881 (Swatow).
— Day, Fauna British India, Fishes,
vol. 2, p. 265, 1889.
— Günther, Rep. Voy. Challenger, vol. 1, pt. 6, p. 28, 1880 (Port Jackson).

Muraena valenciennii Eydoux and Souleyet, Voy. Bonite, Zool., vol.
1841, p. 207, pl. 8, fig. 1 (type locality, Hawaiian Islands).

Muraena tenebrosa Richardson, Voy. Erebus and Terror, Ichth., 1844-
8, p. 84 (type locality, not given probably Society Islands).

Gymnothorax tenebrosus Seale, Occas. Pap. Bishop Mus., vol. 4, no.
1906, p. 7 (Tahiti).

Muraena acutirostris Abbott, Proc. Acad. Nat. Sci. Phila., 1860, p.
476 (type locality, Hawaiian Islands).

Lycodontis acutirostris Fowler, Proc. Acad. Nat. Sci. Phila., 1900,
p. 494, pl. 18, fig. 5 (type).

Eurymyctera acutirostris Fowler, op. cit., 1912, p. 27 (type).

Thyrsoidea kaupi Abbott, op. cit., 1860, p. 477 (type locality,
Hawaiian Islands).

Lycodontis kaupi Fowler, op. cit., 1900, p. 494, pl. 18, fig. 6
(type).

Gymnothorax kaupi Fowler, op. cit., 1912, p. 21 (type).

Lycodontis pseudothyrsoides (not Bleeker) Fowler, op. cit., 1900,

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Lycodontis favaginea (Schneider).

Gymnothorax favaginea Schneider, Syst. Ichth. Bloch, 1801, p. 525,

l. 105 (type locality, Tranquebar).

Lycodontis favaginea Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 57

Society Is.; Rangiroa).

Gymnothorax tessellatus Kendall and Goldsborough, Mem. Mus. Comp .

ool., vol. 26, 1911, p. 247 (Rangiroa).

Gobius albo-punctatus Günther, ⁹⁸¹
Cat. Fish. Brit. Mus., vol. 3, p. 25,
1861 (Egypt; China; Fiji). — Day,
Fishes of India, pt. 2, p. 294, pl. 63,
fig. 7, 1876 (Port Blair).

Gymnothorax gracilicauda Jenkins, Bull. U. S. Fish Comm., vol. 22,
2 (1903), p. 426, fig. 6 (type locality, Honolulu).--Snyder, op. cit., vol.
, 1902 (1904), p. 518 (off Molokai).--Jordan and Evermann, op. cit., vol.
pt. 1, 1903 (1905), p. 94, fig. 23 (types).

Gymnothorax pictus (not Ahl) Seale, Occas. Pap. Bishop Mus., vol. 2,
p. 1, 1902 (1903), p. 6 (Tahiti).

Gymnothorax nubilus (not Richardson) Seale, op. cit., p. 7 (Tahiti).

Gymnothorax zonipectis Seale, op. cit., p. 7, pl. upper fig. (type
locality, Tahiti).

Gymnothorax detactus Seale, op. cit., p. 6 (Nukuhiva, Marquesas).

Gymnothorax stellatus Kendall and Goldsborough, Mem. Mus. Comp.
ool., vol. 26, 1911, p. 248 (Fakarava).

Gobius nebulosus Valenciennes
 Hist. Nat. Poiss., vol. 12, p. (43) 58,
 1837 (type locality, Red Sea).
 — Rüppell, Neue Wirbelth. Fische,
 p. 139, 1838 (near Tor); — Günther,
 Cat. Fish. Brit. Mus., vol. 3, p. 26,
 1861 (Red Sea).

— Bleeker, Act. Soc. Sci. Ind. Neerl.,
 no. 9, vol. 3, p. (4) 40, 1857-58 (Trusan,
 Sumatra); (Acht. Sumatra) vol.
 8, p. 42, Feb. - Aug. 1859 (reference).

Gobius punctillatus Rüppell, Atlas
Reise Nordl. Afrika, Fische, p. 138,
1828 (type locality, Red Sea).

Gobius albopunctatus Valenciennes,
Hist. nat. Poiss., vol. 12, p. (~~43~~) 57,
1837 (type locality, "la mer des Indes" ^{mauritius} ~~Péron~~);
— Kner, Reise Novara, Fische, vol. 2,
p. 173, 1865 (Tahiti). — ^{Martens, Preuss. Exped. Ost Asien, vol. 1, 1846, p. 391 (Larentuba: Flores).} Günther,
Journ. Mus. Godeffroy, vol. 6, pt. 11,
p. 172, pl. 110, fig. a, 1877 (Fiji;
Society Is.; Samoa; Kingmills;
Hawaii). — Sauvage, Bull. Soc.
Philom. Paris, ser. 7, vol. 5, p. 106, 1881
(Swatow). — Boulenger, Ann. Mag. Nat.
Hist. London, ser. 6, vol. 20, p. 373, 1897
(Rotuma). — Pellegrin, Bull. Mus.
Hist. Nat. Paris, vol. 4, p. 229, 1898 (Guam).
— Fowler, Proc. Acad. Nat. Sci. Phila-
delphia, p. 517, 1900 (Hawaiian Islands).
— Bryan and Herre, Occas. Pap. Bishop
Mus., vol. 2, no. 1, p. 135, 1902 (1903) (Marcus I.).

Gobius nebulopunctatus Klunzinger,
Verh. zool. bot. Gesell. Wien, vol.
21, p. 472, 1871 (Red Sea); Sitzb.
Ber. Akad. Wiss. Wien, Math.-naturw.
Classe, vol. 80, pt. 1, p. 382, 1879 (1880)
(King George's Sound; Victoria).
— Thaillay, Proc. Linn. Soc. New
South Wales, vol. 9, pt. 1, p. 31, 1884
(copied).

Lycodontis chilospora (Bleeker).

Gymnothorax chilospora Bleeker, Ned. Tyds. Dierk., vol. 2, 1865, p.

(type locality, Benkulen, Sumatra; Amboyna; Wahai, Ceram; Kajeli, Buro).

Muraena chilospilus Günther, Journ. Mus. Godeffroy, vol. 9, pt. 17,

10, p. 415 (Tahiti).

Lycodontis chilospora Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 58

Society Is.).

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Gobius cyclopterus Valenciennes

Gobius cyclopterus Valenciennes, Hist.
Nat. Poiss., vol. 12, p. (44)⁵⁹, 1837 (type
locality, Cartaret Harbor, New
Ireland). — Fowler, Mem. Bishop
Mus., vol. 10, p. 405, 1928 (copied).

— Günther, Cat. Fish. Brit. Mus., vol. 3,
p. 17, 1861 (copied).

~~Gobius padangensis Bleeker~~

Gobius padangensis Bleeker, Nat.
Tijds. Ned. Indie, vol. 1, p. 243, 1850
(type locality, Padang, Sumatra);
Act. Soc. Sci. Ind. Ned. (Ned. Soc.
Sumatra), vol. 8, p. 42, Feb. - Aug.
1859 (Padang; Priaman).

Gobius breviceps Blyth, ^{Journ.} ~~Proc.~~ Asiatic
Soc. Bengal, 1858, p. 271.
vol. 27,

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Gobius nox Bleeker

Gobius nox Bleeker, Nat. Tijds.
ned. Indie, vol. 1, p. 248, 1851
(type locality "Sumatra occidentalis, in mari");
Act. Soc. Sci. Ind. ned. (Acht.
Sumatra), vol. 8, p. 42, Feb. - Aug.
1859 (Priaman; Siboga); Verslag.
vol. 12, p. 215, 1856-57 (Nat).

Kon. Akad. Wet. Amsterdam, ser. 2,
vol. 2, p. 288, 1868 (Solor). —
Günther, Cat. Fish. Brit. Mus.
vol. 3, p. 28, 1861 (copied). — Herre,
Gobies of Philippines, p. 116, 1927
(Hong Kong, China).

987

Gobius tjilankahanensis Bleeker

Gobius tjilankahanensis Bleeker,
Nat. Tijds. Ned. Indie, vol. 1, p. 251,
1850 (type locality, Tjilankahan,
Bantam).

Gobius tjilankahanensis Günther,
Cat. Fish. Brit. Mus., vol. 3, p. 4,
1864 (reference).

Gobius cocosensis Bleeker, Nat. Tijds.
Ned. Indie, vol. 7, p. 47, 1854 (type
locality, Cocos - Keeling Islands).

988

Gobius breffti Steindachner, Sitzs.
Ber. Akad. Wiss. Wien, vol. 53, p.
451, 1866 (type locality, Port Jackson,
Australia).

Mapo breffti McCulloch and Ogilby,
Rec. Austral. Mus., vol. 12, no. 10, p. 234,
pl. 33, fig. 4, 1919 (Port Stephens; Jervis
Bay; Port Jackson)
Bathygobius breffti McCulloch, Austral. Mus. Mem.,
no. 5, pt. 3, p. 375, Nov. 28, 1929 (reference).
Gobius criniger (not Valenciennes) Stein-
dachner, op. cit., vol. 56, pt. 1, p. 326,
1867.

Eleotris melanosoma (not Bleeker) Schmeltz,
Cat. Mus. Godeffroy, no. 4, p. 18, 1869
(Samoa).

Gobius soporator (not Valenciennes) Schmeltz,
op. cit., no. 5, p. 28, 1874 (Samoa; Tonga).
Günther, Journ. Mus. Godeffroy, vol.
6, pt. 11, p. 173, pl. III, fig. 13, 1877 (Samoa;
Tonga).

Lycodontis richardsonii (Bleeker).

Muraena richardsonii Bleeker, Nat. Tyds. Ned. Indie, vol. 3, 1852, p. 296 (type locality, Wahai, Ceram; Padang, Sumatra). --Kner, Reise Novara, Fische, vol. 1, pt. 5, 1865, p. 385 (Tahiti). --Günther, Journ. Mus. Godeffroy vol. 9, pt. 17, 1910, p. 414 (Society Is.). --Kendall and Goldsborough, Mem. Mus. Comp. Zool., vol. 26, 1911, p. 246 (Bora Bora, Society Is.).

Muraena richardsoni Günther, Rep. Voy. Challenger, vol. 1, pt. 6, 1880, p. 58 (Tahiti).

Lycodontis richardsonii Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 58, pl. 11 D (Honolulu; types of *Gymnothorax hilonis* and *G. berndti*; Society Is.; Bora Bora); vol. 11, no. 6, 1934, p. 390 (reference).

Gymnothorax richardsoni Herre, Journ. Pan Pac. Res. Inst., vol. 7, no. 1, Jan.-March 1932, p. 3 (Tahiti).

Gymnothorax hilonis Jordan and Evermann, Bull. U. S. Fish Comm., vol. 22, 1902 (1903), p. 167 (type locality, Hilo, Hawaii); vol. 23, pt. 1, 1903 (1905), p. 102, pl. 18 (type).

Gymnothorax berendti Snyder, op. cit., vol. 22, 1902 (1904), p. 518 pl. 4, fig. 8 (type locality, Honolulu). --Jordan and Evermann, op. cit., vol. 23, pt. 1, 1903 (1905), p. 98, pl. 15, fig. 2 (type).

Mapo saporator Seale, Ocean. Pap. Bishop
Mus., vol. 4, no. 1, p. 84, 1906 (Makatea;
Tahiti; Nukuhiva). — Kendall and
Radcliffe, Mem. Mus. Comp. Zool., vol.
35, p. 147, 1912 (Mangareva).

Gobius homocyanus Vaillant and Sauvage,
Revue Mag. Zool., sér. 3, vol. 3, p. 280,
1895 (type locality, Sandwich Islands).

Gobius darnleyensis Alleyne and
Macleay, Proc. Linn. Soc. New South
Wales, vol. 1, p. 331, pl. 12, fig. 1, 1877
(type locality, about dead coral at
Darnley Island).

Gobius nigripinnis Alleyne and Macleay,
op. cit., p. 332, pl. 12, fig. 2, 1877 (type
locality, Palm Island).

Lycodontis hepatica (Rüppell).

Muraena hepatica Rüppell, Atlas Reise Nordl. Afrika, Fische, 1828, p
120 (type locality, Red Sea).

Gymnothorax hepatica Fowler, Occas. Pap. Bishop Mus., vol. 8, no. 7,
1923, p. 375 (Honolulu).

Lycodontis hepatica Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 58
(Honolulu).

Gobius caledonicus Sauvage, Bull. Soc.
Philom. Paris, ser. 7, vol. 14, p. 46, 1879.
(type locality, New Caledonia).

Gobius brevifilis (not Day) Günther,
Rep. Voy. Challenger, vol. 1, pt. 6, p. 28,
1880 (Port Jackson). — Ogilby,
Cat. Fish. New South Wales, p. 35,
1886. — Waite, Mem. New South Wales
Natural. Club, vol. 2, p. 45, 1904.

Gobius sandvicensis Günther, op. cit., p. 60.
(type locality, Honolulu, fresh water).

(not Valenciennes)
Gobius buccatus, Macleay, Proc. Linn. Soc.
New South Wales, vol. 5, pt. 4, p. 605, 1881
(Sydney).

Gobius flavidus Macleay, op. cit., p. 602
(type locality, Port Jackson). —
Waite, op. cit.

Lycodontis monostigma (Regan).

Muraena monostigma Regan, Ann. Mag. Nat. Hist., London, ser. 8, vol. 4, 1909, p. 438 (type locality, Tahiti; Raiatea). --Günther, Journ. Mus. Godeffroy, vol. 9, pt. 17, 1910, p. 409, fig. of head (types).

Lycodontis monostigma Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 59

(copied).

Gobius marginalis De Vis, Proc. Linn.
Soc. New South Wales, vol. 9, pt. 3,
p. 686, 1884 (type locality, Cape York).

Gobius aeoloxoma Ogilby, Austral.
Mus. Mem., no. 2, p. 61, 1889 (type
locality, Lord Howe Island). —
Waite, Records Austral. Mus.,
vol. 5, pt. 3, p. 176, pl. 23, fig. 2,
March 11, 1904 (Lord Howe Island).

Gobius ornatus (not Rüppell)
Fowler, Proc. Acad. Nat. Sci. Phila-
delphia, 1900, p. 523 (Tahiti).

Gobius poecilichthys Jordan and
Snyder, Proc. U. S. Nat. Mus., vol.
24, p. 52, fig. 4, 1901 (type locality,
Misaki, Kanagawa).

Lycodontis nudivomer (Günther).

Muraena nudivomer Günther, Fishes of Zanzibar, 1866, p. 127, pl. 18
(type locality, Zanzibar); Cat. Fish. Brit. Mus., vol. 8, 1870, p. 104 (type).

Lycodontis nudivomer Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 59
Honolulu; types of *Gymnothorax goldsboroughii* and *G. xanthostomus*); Proc. U.
Nat. Mus., vol. 80, art. 6, 1931, p. 3 (Ua Huka, Marquesas); Mem. Bishop
Mus., vol. 11, no. 6, 1934, p. 390 (reference).

Gymnothorax goldsboroughii Jordan and Evermann, Bull. U. S. Fish
Comm., vol. 22, 1902 (1903), p. 167 (type locality, Honolulu).--Snyder, op.
cit., vol. 22, 1902 (1904), p. 518 (Honolulu). --Jordan and Evermann, op. cit.,
vol. 23, pt. 1, 1903 (1905), p. 100, fig. 26 (type).

Muraena goldsboroughii Günther, Journ. Mus. Godeffroy, vol. 9, pt. 17
190, p. 418 (Hawaiian Is.).

Gymnothorax xanthostomus Snyder, Bull. U. S. Fish Comm., vol. 22,
1902 (1904), p. 519, pl. 5, fig. 10 (Honolulu).

Mapo crassiceps Jordan and Seale,
Bull. Bur. Fisher., vol. 25, p. 403, fig.
92, 1905 (1906) (type locality,
Vaisigano River and Apia Bay, Samoa).

Mapo mearnsi Evermann and Seale,
Proc. U. S. Nat. Mus., vol. 31, p. 510, fig.
2, 1906 (type locality, Zamboanga,
Mindanao).

Bathygobius mearnsi Herre, (Gobies of
Philippines, p. 116, 1927 (types;
Bungau); Journ. Pan Pac. Res. Inst., vol. 8, no. 4, p. 10,
1933 (Fish. Herre Philippine Exped. 1931, p. 82,
1934 (Roxas and Marten, Depart. Agric. Comm. p. 133, 1937 (reference)).

Bathygobius ~~not~~ Herre, op. cit., p.
112, pl. 8, fig. 1 (type locality,
Ranblan; Caballian, Leyte,
Cotabato). — Roxas and Marten,
op. cit. (reference).

Gobius ophthalmicus Weber

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Gobius ophthalmicus Weber, Notes
Leyden Mus., vol. 31, p. 150, 1909
(Type locality, Lombok); Siboga
Exped., vol. 65, Fische, p. 463, fig.
90, 1913 (type). — Beaufort, Bijd.
Dierk. Amsterdam, vol. 19, p. 139,
1913 (Saonek, Waigiu). — Fowler,
New. Bishop Mus., vol. 10, p. 404,
1928 (copied).

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Gobius villosus Weber

Gobius villosus Weber, Notes Leyden
Mus.,
p. 151, 1909 (type locality, Menado);
Siboga Exped., vol. 57, Fische, p.
466, fig. 92, 1913 (types).

— Taniyama, Jap. Journ. Zool., vol.
7, no. 1, p. 63, fig. 16, 1936 (Nidaura).

Arombus whitleyi Fowler, Mem. Bishop
Mus., vol. 11, no. 5, p. 362, fig. , 1931
(type locality,

995

Depth 5 to $5\frac{1}{2}$; head 3 to $3\frac{1}{5}$,
width $1\frac{2}{5}$ to $1\frac{1}{2}$. Snout $3\frac{3}{4}$ to
4 in head; eye $3\frac{1}{4}$ to $3\frac{3}{4}$,
greater than snout or interorbital;
mouth little inclined, with
snout tip well below level of
eye, jaws about equal, and
mouth cleft extends $\frac{1}{2}$ in eye,
length $2\frac{1}{3}$ to $2\frac{1}{2}$ in head;
teeth conic, firm, rather strong,
close set, curved, biserial, at
least in front of jaws, and
medially rather large tooth in
each mandibular ramus, curved
back; tongue fleshy, with median
notch in front forming two slight
lobes; interorbital narrow,
bony width $\frac{1}{4}$ to $\frac{1}{2}$ of eye.
Gill opening lateral, restricted,
with broad isthmus.

996

Scales 31 or 32 + 2 in lateral axial series; 12 transversely. from soft dorsal origin; 6 predorsal forward to occiput, imperfect or appear as if fallen in most young, whole region to eyes variably more or less scaly with age. Head otherwise entirely naked. Papillae little developed or evident on head in young. Row along each mandibular ramus, back along and up close behind preopercle edge. Chest and breast scaleless, also prepectoral region. Scales smallest anteriorly on body, or crowded, larger on tail and posteriorly.

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D. VI - I, 9, second spine $1\frac{4}{5}$
to 2 in head, first branched
ray 2; A. I, 8, fin height 2;
caudal $1\frac{1}{8}$ to $1\frac{1}{4}$, rounded
behind; least depth of caudal
peduncle $2\frac{2}{5}$; pectoral $1\frac{1}{5}$ to
 $1\frac{1}{4}$, 4 of upper rays detached
and free; ventral $1\frac{1}{4}$ to $1\frac{2}{5}$.

One example. Dumuring Point,
Masbate. Shore. April 19, 1908.
Length 34 mm.

Two examples. Reef opposite Cebu,
Cebu. April 5, 1908. Length 13 to 41
mm.

Two examples. Maricaban Island,
Luzon. Shore under stones. June 20,
1908. Length 67 to 82 mm.

One example. East side of
Tagbalaran Strait, Bohol
Island. April 9, 1908. Shore
seine. Length 60 mm.

One example. Mahinog, Camiguin
Island. From fishermen. August 3,
1909. Length 53 mm. Quite dark in
color.

Two examples. Mahinog, Camiguin
Island. Tide pools. August 3, 1909.
Length 42 to 50 mm.

Two examples. Balayan Bay,
Ligbo Point, Luzon. January 18,
1908. Shore. Length 45 to 49 mm.
Smaller with swollen snout.

One example. Little Santa Cruz
Island, Zamboanga. May 26, 1908.
Length 43 mm.

Three examples. Mactan Island.
August 28, 1909. Length 43 to 45
mm.

Twenty seven examples. D. 5147.
Sulade Island (E.) N. 3° E.,
8.40 miles (lat. $5^{\circ}41'40''$ N.,
long. ~~117~~ $120^{\circ}47'10''$ E.), Sulu
Archipelago, vicinity of
Liasi. On 21 fathoms.
February 16, 1908. Length 20 to
51 mm. [III.]

U. S. N. Mus., no. 72280. Aua,
Tutuila, Samoa, Bureau of
Fisheries. Length 35 to 47 mm.
Four examples.

U. S. N. Mus., no. 71401. Naha,
Okinawa, Ryū Kyū Islands, Japan.
Albatross Expedition 1906. Length
28 to 55 mm. Twenty-two examples.
As Mafo crassiceps.

Two examples. Simalue Island,
tide pools. September 22, 1909.
Length 50 to 54 mm.

U. S. N. M., no. 17995. Honolulu,
Hawaiian Islands. Dr. J. H. Streets.
Length 32 to 54 mm. Three
examples. As Gobius albopunctatus.

~~U. S. N. M., no. 12638. Zanzibar.
British Museum. Length 92 mm.
As Gobius albomaculatus~~

U. S. N. M., no. 34818. Honolulu,
Hawaiian Islands. March 1883.
Dr. W. H. Jones. Length 136 mm.
As Mapo soporator.

U. S. N. M., no. 52233. Apia,
Samoa. Bureau of Fisheries
(06530). Length 34 to 85 mm.
Thirteen examples. As Mapo
soporator.

U. S. N. M., no. 56991. Apia,
Samoa. Bureau of Fisheries
(03561). Length 35 to 53 mm.
Twelve examples. As Mapo
soporator.

gab

U. S. N. M., no. 38285. Honolulu,
Oahu. Dr. W. H. Jones. Length 34 to
43 mm. Six examples.

U. S. N. M., no. 51139. Hawaii.
U. S. Fish Comm. Length 55 to 78
mm. Five examples.

U. S. N. M., no. 51166. Hilo,
Hawaii. Bureau of Fisheries.
Length 21 to 39 mm. Two examples.

U. S. N. M., no. 55164. Pearl
Harbor, Oahu. April 23, 1902.
Bureau of Fisheries. Albatross
Explorations. Length 30 to 50 mm.
Thirty-two examples.

U. S. N. M., no. 55201. Wailua
Bay, Oahu. Bureau of Fisheries.
Length 18² to 92 mm. Fifty-two
examples.

U. S. N. M., no. 55202. Necker
Island. Bureau of Fisheries.
Albatross Explorations 1902. Length
69 to 116 mm. Five examples.

1003
U. S. N. M., no. 55148. Honolulu,
Oahu. U. S. Fish Comm. Albatross
Explorations 1902. Length 26 to 52
mm. Sixty-five specimens.
As Gobius albopunctatus.

1004
U. S. N. M., no. 55277. Kealahou Bay,
Hawaii. U. S. Fish Comm.
Albatross Explorations 1902.
July 14. Length 42 to 62 mm.
Seven examples. As Gobius
albopunctatus.

U. S. N. M., no. 55276. Kapili,
Hawaiian Islands. U. S. Fish.
Comm. Albatross Explorations 1902.
Length 32 to 71 mm. Twelve
examples.

U. S. N. M., no. 55278. Honolulu,
Oahu. U. S. Fish Comm. Albatross
Explorations 1902. Length 14 to 53 mm.
189 examples.

U. S. N. M., no. 55279. Puako
Bay, Hawaii. U. S. Fish Comm.
Albatross Explorations. Length
²⁸~~40~~ to 96 mm. Seventeen examples.

U. S. N. M., no. 55280. Honolulu,
Oahu. U. S. Fish Comm. Albatross
~~Expl~~ Explorations. Length 20 to 55 mm.
271 examples.

U. S. N. M., no. 55281. Waianae,
Hawaiian Islands. U. S. Fish
Comm. Length 20 to 30 mm. Five
examples.

U. S. N. M., no. 55282. Honolulu.
U. S. Fish Comm. 1901. Length 30 mm.

1006
U. S. N. M., no. 55283. Honolulu,
Oahu. U. S. Fish Comm. (03444)
Length 21 to 43 mm. Thirty-two
examples.

U. S. N. M., no. 55284. Reef in
front of Honolulu. August 16, 1901.
U. S. Fish Comm. Length 25 to 43
mm. Twenty examples.

U. S. N. M., no. 55285.
Hawaiian Islands. U. S. Fish
Comm. 1901. Length 25 to 98 mm.
Eighty-five examples.

U. S. N. M., no. 55286.
Hawaiian Islands. U. S. Fish
Comm. Length 43 to 83 mm. ~~Five~~ Six
examples.

U. S. N. M., no. 55287. Waikiki,
Oahu. U. S. Fish Comm. Length 16
to 56 mm. Thirty-five examples.

U. S. N. M., no. 57927. Zamboanga,
Philippines. Dr. E. A. Mearns.
Length 50 to 53 mm. Two
examples.

U. S. N. M., no. 65949. Rangiroa,
Tuamotus. U. S. Fish Comm.

Albatross Explorations 1899.

Length 48 to 80 mm. Five examples.

U. S. N. M., no. 65571. Mangareva.

February 3. U. S. Fish Comm.

Albatross Explorations 1904 - 5.

Length ~~22~~¹⁸ to 98 mm. Thirty-~~one~~^{three} examples. Light brown with characteristic spots pearly, brownish on dorsal and caudal. General shade very dependent on character of bottom.

U. S. N. M., no. 65950. Makemo,

Tuamotus ^{October 20.} U. S. Fish Comm. 1899.

Albatross Explorations. Length - 45 to 62 mm. Three examples.

U. S. N. M., no. 65951. Armo Atoll,
Marshall Islands. U. S. Fish Comm.

(08913). Albatross Explorations.

Length 33 mm.

U. S. N. M., no. 78066. no locality.
U. S. Fish Comm. Length 44 mm.

U. S. N. M., no. 71434. Tanegashima¹⁰⁰⁹
Island, Japan. Bureau of Fisheries.
Albatross Expedition 1906. Length
45 to 88 mm. nineteen examples.

U. S. N. M., no. 71481. Kaga,
Okinawa, Luchu Islands, Japan.
Bureau of Fisheries. Albatross
Expedition 1906. Length 33 to 58 mm.
Eleven examples.

U. S. N. M., no. 87618. Tahiti,
Society Islands. J. M. Clements.
Length 45 to 99 mm. Five examples.

U. S. N. M., no. 87927. Niuafoou
Island, Polynesia. August 23, 1930.
Lieut. H. C. Kellers. Length 63 mm.

U. S. N. M., no. 89488. Hawaii.
Otto Degener. Length 96 mm.

U. S. N. M., no. 89533. Hawaii.
Otto Degener. Length 53 to 72 mm.
Two examples.

U. S. N. M., no. 91902. Niuafoou
Island, Polynesia. September 13,
1903. Lieut. H. C. Kellers. Length
28 to 90 mm. Six examples.

U. S. N. M., no. 89775. Eiao,
tide pool, Marquesas Islands.
September 28, 1929. C. S. Stahlnecker.
G. Pinchot South Sea Expedition.
Length 47 to 60 mm. As Gobius
ornatus.

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U. S. N. M., no. 91903. Hinafou
Island, Polynesia. September 14,
1930. Lieut. H. C. Kellers. Length
76 mm.

U. S. N. M., no. 91904. Hinafou
Island. September 17, 1930. Lieut.
H. C. Kellers. Length 42 to 44 mm.
Two examples.

U. S. N. M., no. 91906. Hinafou
Island. September 17, 1930. Lieut.
H. C. Kellers. Length 55 to 86 mm.
Five examples.

U. S. N. M., no. 91907. Benkoelen,
Sumatra. December 19, 1925. Lieut.
H. C. Kellers. Length 40 mm.

U. S. N. M., no. 91908. Hinafou
Island, Polynesia. August 27, 1930.
Lieut. H. C. Kellers. Length 52 to 98
mm. Four examples.

U. S. N. M., no. 91909. Hinafou
Island, Polynesia. October 5, 1930.
Lieut. H. C. Kellers. Length 69 mm.

U. S. N. M., no. 91910. Hinafou Island.
October 5, 1930. Lieut. H. C. Kellers.
Length 58 to 89 mm. Four examples.

U. S. N. M., no. 91911. Hinafou¹⁰¹²
Island, Polynesia. October 12, 1930.
Lieut. H. C. Kellers.
Length 65 to 79 mm. Six examples.

U. S. N. M., no. 91912. Hinafou
Island. October 12, 1930. Lieut. H.
C. Kellers. Length 57 to 106 mm.
Thirteen examples.

U. S. N. M., no. 91985. Hinafou
Island. September 13, 1930. Lieut.
H. C. Kellers. Length 65 mm.

~~U. S. N. M.,~~

U. S. N. M., no. 49919. Misaki,
Sagami, Japan. D. S. Jordan
and J. O. Snyder. Length 27
mm. "Co-type".

U. S. N. M., no. 71496. Misaki,
Sagami, Japan. Bureau of
Fisheries. Albatross Expedition
1906. Length 56 to 75 mm. Two
examples.

U. S. N. M., no. 71516. Tan-
gashima Island, Japan. Bureau
of Fisheries. Albatross Expedition
1906. Length 38 to 70 mm. Ten
examples.

U. S. N. M., no. 88040. Benkoelen,
Sumatra. December 19, 1925. Length
34 to 37 mm. Two examples.

Gobius galwayi (McCulloch^{10/4}
and Waite)

Augilogobius galwayi McCulloch
and Waite, Records South Austral.
Mus., vol. 1, pt. 1, p. 50, pl. 3, fig. 1,
May 24, 1918 (type locality,
Pattawalunga, near Adelaide,
South Australia). — McCulloch,
Austral. Mus. Mem., no. 5, pt. 3, p.
376, Nov. 28, 1929 (reference).

(1015)

Gobius gemmeus (Herre)

Gnatholepis gemmeus Herre, Gobies
of Philippines, p. 135, pl. 9, fig. 3,
1927 (type locality, Samal Island,
in Davao Gulf, Mindanao);
Sitambai; Dumaguete; San Juan,
Siquijor); Journ. Pan-Pac. Res.
Inst., vol. 8, no. 4, p. 10, 1933
(Dumaguete); Fish. Herre Philippine
Exped. 1931, p. 82 (1934).
— Roxas and Marton, Departm.
Agric. Comm. Manila, Techn. Bull.
60, p. 232, 1937 (reference).

Depth 4 to $4\frac{3}{5}$; head $3\frac{1}{2}$ to $3\frac{7}{10}$.
Snout 3 to $3\frac{2}{5}$ in head; eye $3\frac{4}{5}$
to 4, $1\frac{3}{5}$ in snout, greatly
exceeds interorbital; maxillary
reaches almost to front eye edge,
length $2\frac{2}{5}$ in head from snout
tip; mouth cleft oblique, small,

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begins in front slightly below ^{level of} lower ~~the~~ eye edge; upper teeth in 2 rows, curved, depressible, preceded by 1 or 2 pairs of long, slender, inward-curved canine like teeth on either side of median line of jaw; lower teeth biserial, outer row of 10 or 12 large wide spaced teeth, ending in pair of backward curved canines; inter-orbital narrow, $3 \frac{1}{2}$ in eye, which nearly enters upper profile of head.

Scales 25 to 27 in lateral series; 10 transversely, 10 predorsal, with nape narrowed, almost ridge like. Cheek and preopercle scaled, also pectoral base. Body with loosely attached, large, ctenoid scales, denticles easily rubbed off so scales may often appear cycloid. No papillae or grooves on cheek.

(1017) to 1⁷/₁₀.

D. VI - I, 11 or I, 12, third spine 1¹/₄
in head, fin height 1¹/₃ to 1¹/₂;
A. I, 11, fin height 1²/₃; caudal
3¹/₆ in rest of fish; least depth
of caudal peduncle 2¹/₄; pectoral
1¹/₈; ventral 1¹/₈.

In alcohol dark yellowish
brown to very pale yellowish
brown. Along sides 6 broad dark
cross bands, posterior ones large,
circular spots in young specimens;
each band margined by wide
stripe of pearly white. Breaks
up with age, so longitudinal
rows of pearly white spots formed
along sides. Narrow dark brown
stripe passes vertically through
eye and down across cheek;
sometimes crossed by 1 or 2 short
transverse lines. Longitudinal
faint brown line passes across
middle of opercle and on across
pectoral base, where darker.

Preopercle, opercle and pectoral bases with large circular pearly spots. Hape and sides below dorsal dotted with small dark brown spots. First dorsal crossbarred by brown and white spots; near base of sixth spine circular blackish brown spot and paler one on basal part of fourth spine. Second dorsal rays dusky, with brown up and down streaks more or less developed on membrane. Anal crossed by 2 rows of large, conspicuous circular black spots, alternating with white. Dark brown spot on caudal base, followed by several blackish spots, rest of fin more or less cross-barred by small brown spots. Pectoral cross-barred by small brown spots. Ventrals dusky or specked with brown, or gray, with dark brown margin.

Length 25 to 45 mm. (Here.)

Philippines.

Gobius giurinus Rutter

Gobius giurinus Rutter, Proc. Acad.
Nat. Sci. Philadelphia, ^{vol. 47,} p. 86, 1898
(type locality, Swatow) — Tomiyama,
Jap. Journ. Zool., vol. 7, no. 1, p. 68,
1936 (Japan south of Tiba;
Ryukyu; Formosa).

Gobius (Rhinogobius) giurinus Rendahl,
Arkiv för Zool. Stockholm, p. 18,
1924 (reference).

Rhinogobius giurinus Jordan and Hubbs,
Mem. Carnegie Mus., vol. 10, no. 2, p. 308,
June 27, 1925 ^{Nagoya; Malaya;} (Hoochow) — Reeves, Journ. Pan-
Pac. Res. Inst., vol. 2, no. 2, p. 18, July-Sep.
1927 (reference) — Chu, Biol. Bull.
St. John's Univ., no. 1, p. 162, Jan. 1931
(Hoochow).
Jordan and Richardson, Mem. Carnegie Mus., vol. 4, no. 4, p. 200,
Aug. 28, 1909 (Kotosho; Taihoku) — Aburatsubo, Ann. Carnegie Mus.,
vol. 12, nos. 2-4, p. 297, Dec. 15, 1919 (Ako; Tosen R.; Wodensho;
Daito R.; Tamusui R.; Shori; Giran).

Gobius giwiss^u (not Buchanan-Hamilton)
J. F. Abbott, Proc. U. S. Nat. Mus.,
 vol. 23, p. ~~86~~₄₉₁, 1901 (Pei Ho).

Ctenogobius hadropterus Jordan and
Snyder, Proc. U. S. Nat. Mus., vol.
 p. 60, fig. 7, 1901 (type locality, Nagasaki;
 Kurume; Tsunaga; Kawatana).

Gobius (Rhinogobius) hadropterus
Bendahl, Arkiv för Zool. Stockholm,
 vol. 16, no. 2, p. 18, 1924 (Honan, Ching
 Ho).

Ctenogobius platycephalus (not Richardson)
Jordan and Evermann, Proc. U. S. Nat.
 Mus., vol. 25, p. 362, 1902 (Kotosho;
 Taihoku; Formosa).

Depth $4\frac{1}{2}$; head $3\frac{1}{4}$ to $3\frac{1}{3}$. Snout $2\frac{2}{3}$ to $2\frac{4}{5}$ in head; eye 4 to $4\frac{2}{3}$, $1\frac{2}{3}$ to $1\frac{3}{4}$ in snout, greatly exceeds interorbital; maxillary reaches $\frac{7}{8}$ to eye, length $2\frac{3}{4}$ to $3\frac{1}{5}$ in head; mouth low, little inclined with jaws subequal or lower slightly shorter; upper lip wide, width $\frac{2}{3}$ of eye; teeth biserial, small, outer brow above little larger, and no canines; interorbital narrow, concave, eye entering upper profile of head. Gill rakers $2 + 8$, small points.

Scales 28 or 29 in lateral series; 9 or 10 transversely. Predorsal scales not quite extending forward to eye, where cycloid. Head otherwise naked, also prepectoral region. Scales on breast small, or appear absent due to thick epidermis.

D. VI - I, 7 or I, 8, third spine 2 in head, second branched ray 2; A. I, 7 or I, 8, first branched

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ray $2\frac{1}{8}$; caudal $1\frac{1}{4}$ to $1\frac{1}{3}$, rounded or truncate; least depth of caudal peduncle $2\frac{9}{10}$ to 3; ^{none} detached pectoral $1\frac{1}{5}$ to $1\frac{1}{4}$, rays 18 to 20; ventral rays 7, 5, fin $1\frac{1}{3}$ to $1\frac{2}{5}$. Anal papilla $\frac{1}{3}$ of eye.

Pale olive, brown or grayish. Along middle of side row of 6 blackish blotches, usually larger than eye. Alternating on back as many dark saddle like blotches. Narrow dark or blackish band from middle of side of maxillary to lower front eye edge. Predorsal mottled with darker. Dorsals with gray black spots, as 3 rows on first fin longitudinally and 4 on second fin. Caudal with gray vertical bars. Membranes of ventrals gray black. Fins otherwise pale.

China, Formosa, Korea and Japan. Length to 120 mm.

U. S. N. M., no. 85986. China.
 A. de C. Sowerby. Length 41 mm.
 Although uniformly discolored
 this specimen seems in every way
 to agree with the figure of
Ctenogobius hadropterus Jordan
 and Snyder in structural
 characters.

U. S. N. M., no. 86473. China.
 A. de C. Sowerby. Length 70 mm.
 D. VI-9; A. 9; scales 30+1 in
 lateral series, 13 predorsal
 not quite reaching forward to
 eyes.

U. S. N. M., no. 85927. China.
 A. de C. Sowerby. Length 39 mm.
 D. VI-10; A. 10; scales 30.
 predorsal scales 12?

U. S. N. M., no. 49969. Iwumaga,
Echizen, Japan. D. S. Jordan and
J. W. Snyder. Length 53 to 55 mm.
Two examples.

U. S. N. M., no. 53541. Inijan-
oura River $\frac{1}{4}$ mile above mouth
Taku Islands, Japan. June
12, 1905. Robert Anderson.
Length 58 to 103 mm. Fifteen
examples.

U. S. N. M., no. 71406. Tanegashima
Island, Japan. Bureau of Fisheries.
Albatross Expedition 1906. Length 36
to 86 mm. Seventeen examples.

U. S. N. M., no. 71420. Takamatsu
River, Aburatsubo, Satsuma, Japan.
Bureau of Fisheries. Albatross
Expedition 1906. Length 35 to 65 mm.
Nine examples.

U. S. N. M., no. 85905. China.
A. de C. Sowerby. Length 47 to 55
mm. Three examples.

U. S. N. M., no. 49875. Chikugo
River, Kurume, Japan. D. S.
Jordan and J. O. Snyder. Length
53 mm.

U. S. N. M., no. 59571. Shimahaze,
Kochi, Japan. May 7, 1903. Dr.
H. M. Smith. Length 62 mm.

Gobius globiceps (Hora)

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Ctenogobius globiceps Hora, Mem.
Indian Mus., vol. 5, p. 744, text-fig.
24, ~~plates~~ April 1923 (type locality,
Off Samal Island, Chilka Lake;
Rambha Bay; Satpara; between
Cherriakuda and the mainland;
Serna hadi; Mahora, Barhampur
Island; off Balugaon; off Halbano;
off Barbul bungalow; South of
Kalidai).

Gobius goldmanni Bleeker

Gobius goldmanni Bleeker, Nat.
Tijds. Ned. Indie, vol. 3, p. (161) 167,
1852 (type locality, Timor Kupang),
Ned. Tijds. Dierk., vol. 1, p. 271, 1863
(Timor).

Gobius punctillatus Rüppell, Atlas
Reise Hördl. Afrika, Fische, p. 138,
1828 (type locality,

Gobius albopunctatus Valenciennes,
Hist. Nat. Poiss., vol. , p. 57, 1837
(type locality,
Sauvage, Bull. Soc. Philom.
Paris, ser. 7, vol. 5, p. 106, 1881 (Swatow).

Gobius kreftii Steindachner, Sitzb. Ber.
Akad. Wiss. Wien, vol. 53, pt. 1, p. 451,
1866 (type locality, Port Jackson).

Depth 6, body elongate, anteriorly cylindrical, posteriorly compressed; head $4\frac{2}{3}$, obtuse, convex, width $1\frac{2}{5}$. Snout obtuse, shorter than eye; eye 4 in head, advanced, closed to opposite eye; mouth oblique, reaches below eye, upper jaw strongly protractile, lower jaw little protruded; teeth pluriserial in jaws, outer row enlarged; lower jaw with 2 lateral curved canines.

Scales 28 in lateral series; predorsal scaly forward to eyes. Postocular groove prominent.

D. VI - I, 10 or I, 11, last spines and rays lower than body depth and obtuse, and second dorsal angular and higher than body; A. I, 9 or I, 10, angular behind, lower than body; caudal obtuse, rounded, length $4\frac{2}{3}$ in body; pectoral rays 19; ventral rays I, 5; paired fins subequal, 5 times in body length. Anal papilla conic.

Color of body olivaceous above.
below paler. Back and sides
above with bright orellated black
spots. Sides below with several
transverse bright bands. Dorsals
reddish, with black spots.
Caudal and paired fins reddish
olive. Anal brown in front,
yellow posteriorly with black
margin.

Length 63 mm.
Tumor Kupang.

(Bleeker.)